The ACCOUNTI[illegible] REVIEW

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CONTRIBUTORS TO THE SEPTEMBER ISSUE

GEOFFREY CARMICHAEL is assistant professor of accounting at Indiana University. He and Leo A. Schmidt, professor of accounting at Marquette University, have interesting comments to make on the success with which they have utilized objective tests in accounting examinations.

FLORENCE EDLER and her husband, Raymond A. deRoover, a professional accountant, have done considerable research work in connection with the Plantin books of account.

HARRY D. KERRIGAN, instructor in accounting at Northwestern University, continues his discussion of stock dividends, this time concerning himself with the legal limitations on stock-dividend declarations.

WILLIAM A. PATON has obtained an extension of his leave of absence from the University of Michigan in order to teach at the University of California at Berkeley during the coming year. A planograph edition of his *Essentials of Accounting* has just been published by Edwards Brothers, Inc., of Ann Arbor.

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DR SCOTT, professor of accounting at the University of Missouri, believes that the Association in its *Tentative Statement* has done little more than to emphasize the record function of accounting. Do other readers agree?

SHINSHICHIRO SHIMME, whose remarks on the bookkeeping methods of Japanese business are of interest to all students of accounting history, is a graduate of the School of Commerce at Meiji University, Tokyo, and chief auditor of the Kawasaki Dockyard Co., Ltd., at Kobe. He is the author of a number of books and articles on accounting and is particularly interested in the subject of factory costs.

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VALUATION AND AMORTIZATION

Gabriel A. D. Preinreich

WHAT IS A BALANCE SHEET?

Many accountants appear to have no very definite notion of what a balance sheet is. Forthright opinions on the subject are rare; by inference, however, two main trends of thought may be distinguished, one of which is based on the capital-value or property concept and the other on the investment or amount-of-money-advanced concept.

The former is exemplified by the so-called fundamental equation: Assets minus liabilities equal net worth. Numerous remarks on the subject of accounting valuations clearly show that their authors were guided at least temporarily by the idea that a balance sheet is or ought to be a statement of the worth of the business. This comment applies to all who would write up good will not purchased or who hold that, if purchased, it need not be amortized until it is actually worth less than it cost. That patents need not be amortized, because they are, in time, supplanted by good will, and that if a company's stock is quoted at a discount, its balance sheet must be inflated, are further samples of the same trend of thought. Inconsistencies are the rule, rather than the exception. For instance, many who subscribe to these views when discussing so-called intangibles would not uphold them with respect to what they consider tangible assets. On the other hand, those who by no means endorse the capital-value concept, sometimes make statements which sound as if they did. *Leake*, among others, says that "unfortunately it cannot be assumed as a matter of course that the assets or the liabilities of a joint stock company are stated in the balance sheet at their full and fair values" and refers to the "more or less common knowledge that the value of the assets is either greater or less than stated in the balance sheet."[1]

The fallacies of the value idea are discussed by *May:* ". . . accounting is not essentially a process of valuation, as some writers on accounting and some economists conceive it to be. Primarily, accounting is historical in approach, with valuation entering into it at times as a safeguard. The emphasis is on cost, though where an asset is intended for sale and its selling value is known to be less than cost, the lower figure may be substituted for cost . . . The fact is that the word 'value' has come to be used to describe what is a mere figure—'book figure' would be more accurate than 'book value' . . . A balance sheet in which one asset is stated at book value, another at replacement value, a third at liquidation value and a fourth at going concern value, does not yield a figure that can be described as net worth . . . This does not mean that the balance sheet is valueless, but only that it is a highly technical production, the significance of which is severely limited and has in the past often been greatly overrated."[2]

The foregoing excerpts and the rest of the article from which they were taken may explain fully what a balance sheet is *not*, but they certainly remain silent on what it *is*. *Yang* also devotes a great deal of space to the theory of accounting valuations without reaching more than a negative conclusion.

[1] *Cf.* P. D. Leake: *Commercial Goodwill*, Sir Isaac Pitman & Sons, Ltd., London, 1921.

[2] G. O. May: "The influence of accounting on the development of an economy," *Journal of Accountancy*, Jan., 1936, pp. 15–21.

According to him, "a balance sheet is an expression of opinion, a hypothetical magnitude arrived at through a series of complicated and arbitrary computations."[3] Better are the definitions he quotes: "We may look upon annual balance sheets as statements that apportion in a *reasonable* way all payments, whatever their nature, over the whole period during which an undertaking continues to derive advantage from them."[4] "A display to those, such as creditors or proprietors, who have advanced values to a business, showing what has been done by that business with the values so advanced."[5]

The last two descriptions express the investment or amount-advanced concept of the balance sheet, but even they emphasize merely what has been done, not what the result is or ought to be. Modern accounting methods still adhere to the plan followed by Columbus, when he started out by dead reckoning in a "reasonable," *i.e.*, general westerly direction, knowing only whence he came, with perhaps some notion of how far he had come, but without ever being aware of where he was. Since a reasonable westerly direction may lie anywhere between northwest and southwest, it is essential to mention that the accountant's real goal is the liquidating value of the business, to be reached upon the unknown date of liquidation. In other words, *the task is to connect original cost with liquidating value in a way which will give due consideration to both risk and time.* Cost is an advance concept and liquidating value a value concept, each of which is paramount on its date. Between the two dates, both share in determining the course to be followed, the relative importance of the former declining and that of the latter increasing gradually. Only if bearings are continuously taken, not only backward, but also forward, will the course steered come near the true direction. In that case the balance sheet will measure, not the worth or capital value of a business, but the amount of money invested in it at a given stage of the transition. And that is the highest purpose which it can serve, although it may also be adapted to simpler and more generally useful ends.

For certain assets independent methods of taking bearings forward have been developed to a remarkable degree, especially by statisticians and engineers. Many accountants could undoubtedly profit by a study of these methods, even though they are familiar with the general principle that "the accounting function in relation to capital assets is to measure and record, not the fluctuations in their value, but the extent to which their usefulness is exhausted through age or use and to make proper charges against income in respect of such exhaustion, based on the cost of the property exhausted, with the intent that the property shall stand on the books at its salvage value when the term of its usefulness is ended."[6] Uncoördinated methods, however, can lead to no satisfactory result, no matter how great their individual merits may be. What is still lacking is a bird's-eye view of the problem as a whole. Not only must each asset stand on the books at its salvage value when its usefulness is ended, but all assets taken together must be written down to their liquidating value by the time the company's life is ended. This period of life is an uncertainty, which the market regards in terms of the "horizon" (that future point of time beyond which the investor is unable or unwilling to look). Any asset's expectancy of usefulness is, therefore, limited by the horizon. Beyond that limit only its exchange value may be considered.

TANGIBLE AND INTANGIBLE ASSETS

As *Hatfield* has pointed out, "the phrase is not particularly appropriate and, except by enumeration, the separation between tangible and intangible assets is not easily made. There is no real difference between them as regards tangibility, materiality or realness."[7] That is to say, the term "asset" does not

[3] J. M. Yang: *Goodwill and Other Intangibles*, Ronald Press Co., New York, 1927.

[4] E. M. Carter: "What is an annual balance sheet?" *Accountant*, Oct. 22. 1910, p. 566.

[5] C. B. Couchman: *The Balance Sheet*, Journal of Accountancy, Inc., New York, 1924.

[6] May, *op. cit.*

[7] *Cf.* H. R. Hatfield: *Modern Accounting*, D. Appleton Co., New York, 1916, pp. 107–118; and *Accounting, Its Principles and Problems*, D. Appleton Co., 1932, pp. 111–129.

refer to all the inherent or acquired characteristics of material or immaterial property, but only to their aspects as investments. Assets are valued only for their services and this valuation is necessarily governed by two fundamental economic phenomena: risk and interest. So far the attention given by accountants to these basic factors has been quite inadequate and inconsistent, the result being that dubious mixture of conservatism and recklessness, which is commonly called "accounting theory," although it is truly a mere collection of partly obsolete and contradictory conventions or working rules, recopied and reexpounded faithfully year after year.

In theory, differences between assets are limited to differences in the services expected from them either in use or in exchange. The principal criteria are total quantity, intensity, and time-shape of the stream, together with the degree to which each is capable of modification. In practice, there is another important difference: The specific services of some assets can be readily identified and measured, while those of others can not—especially if they are combined into a single productive unit. Valuation of the former is accordingly possible by the direct method, *i.e.*, by the discounting process, whereas the best that can be done for the latter is to value them indirectly, *i.e.*, to maintain a record of what their future services have cost.

Canning has done valuable work in defining direct and indirect valuation,[8] but his thoughts are not always carried to their logical conclusion. With respect to accounts receivable, for instance, he points out that they ought to be discounted for the period of their turnover. He overlooks that cash on hand or a demand deposit bearing no interest is likewise worth its face value only at the moment when its service is rendered, *i.e.*, when it is spent. Cash being thus subject to discount for its own turnover, it follows that accounts receivable must be discounted for the sum of both periods. Rapidly moving merchandise or finished goods can also be valued by the direct method, but it again follows that the discount deducted from "selling price less selling expenses" must cover not only the turnover of the inventory, but the sum of all three turnovers. The suggestion that liabilities should also be discounted for the delay in payment is entirely in order.

In general, accountants give adequate attention to risk in valuing current assets, so that the main question there concerns interest alone. As will appear later, it is proper to omit interest for certain purposes. In any event the treatment of current assets and liabilities could be responsible for only a small fraction of the discrepancies which have rendered the typical balance sheet so meaningless that no one cares to define it. The principal problem is the treatment of the so-called capital assets and the various forms of deferred charges. Examples are illustrated and discussed in subsequent paragraphs.

DEPRECIATION

Leake describes depreciation, in part, as "fall in the exchangeable value of . . . assets."[9] If he had stopped there, he would not only have conformed to etymology, but would also have defined one of the essential bases of accounting valuation. To say that depreciation is the "fall in the exchangeable value of wasting assets, computed on the basis of cost expired during the period of their use in seeking profits"[9] is contradictory, because original cost less cost expired gives, not exchange value, but merely use value, which may, and usually does, differ from exchange value. By his insistence that " 'expired capital outlay' is an exact definition of depreciation",[10] the concept of exchange value is definitely abandoned. Depreciation in this generally accepted sense has nothing to do with exchange value, but is merely concerned with the gradual extinquishment of cost; a task better described as amortization. Whether wasting assets be called tangible or intangible, the same thing, *viz.*, the cost of services not yet rendered, must remain on the books, so that it is il-

[8] J. B. Canning: *The Economics of Accountancy*, Ronald Press Co., New York, 1929.

[9] P. D. Leake: *Depreciation and Wasting Assets*, Sir Isaac Pitman & Sons, Ltd., London, 1917, p. 1.

[10] *Ibid.*, p. 5.

logical to describe the extinguishment of certain assets as depreciation and that of others as amortization.

THE METHOD OF AMORTIZATION

The cost of any capital asset may be analyzed into the present worth of its ultimate selling price plus the present worth of an annuity, each item of which consists of the cost of that unit of service to be rendered. The proper figure at which the asset should be stated in successive balance sheets is therefore obtained by discounting both the remaining service-costs and the ultimate selling price down to the successive dates. The difference between two consecutive summations is the net amortization, which may readily be separated into a charge for services rendered and a credit for interest on the investment. If it is not essential that the balance sheet should record the true investment, interest may be omitted in the distribution.

The foundation for amortization is a curve showing the decline in the exchange value of an asset during the course of its useful life. By marking on this curve the point at which its usefulness is expected to come to an end,

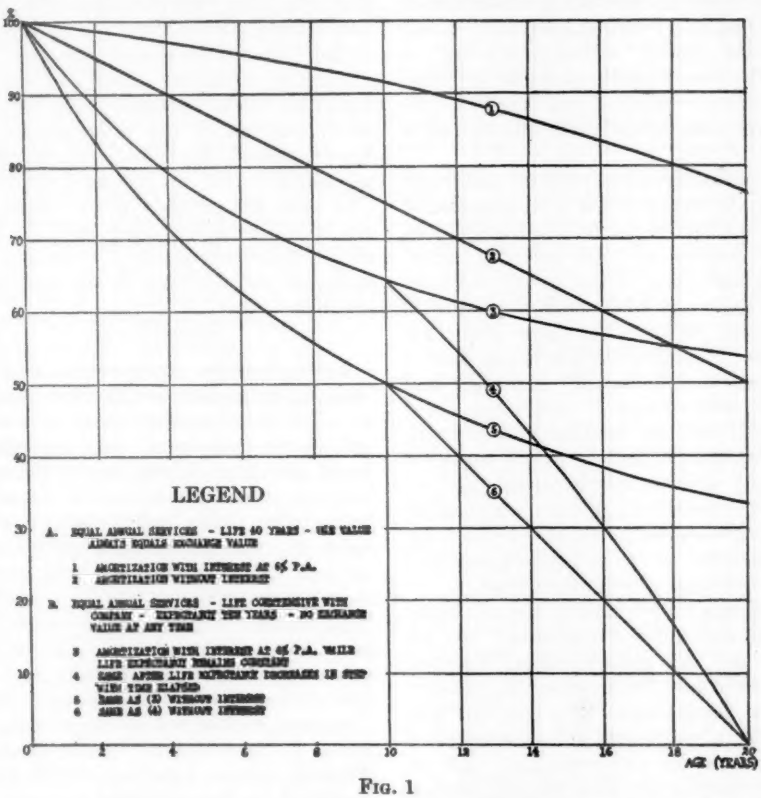

Fig. 1

the allocation of cost to services and liquidating value is determined. The form of this real depreciation curve differs widely for different assets. In some cases, exchange value practically equals use value, while in others it drops immediately to zero. Between these extremes lie all other cases, where exchange value declines more or less rapidly to a salvage value or to zero, sometimes long before the asset has outlived its usefulness.

This behavior of exchange values is explained by the more or less specialized utility of assets. Some are equally useful to anyone, whereas others can serve only their original owner. In general, second-hand equipment commands only a restricted market controlled by the buyer, so that the entire remaining use value can seldom be realized upon sale. Amortization must be computed with due regard for these variations.

EXAMPLES OF AMORTIZATION

A leasehold which has been subleased for its entire term may be taken as a fairly good sample of an asset commanding an exchange value practically equal to its use value to the sublessor. Curve (1) in Fig. 1 shows the amortization line connecting its original value with a final exchange value of zero forty years later. The ordinates of this curve were obtained by finding that forty-year annuity which $1 will purchase at 6% *per annum* and plotting the worth of the decreasing number of payments still due on the successive dates. The amortization of such an asset will be entirely independent of the life expectancy of the business itself, since the curve of depreciation (exchange value) and the curve of amortization (investment or use value) follow the same law. The ordinate of the curve will represent either cost or fair market value, dpending upon whether the asset is being valued indirectly or directly.

The opposite extreme is illustrated by organization or preliminary expenses, which have no salvage value. In such a case, amortization will depend entirely upon the life expectancy of the company. Assuming it to be ten years, the first year's amortization will be the difference between an eleven-year annuity worth cost and the present worth of its ten remaining payments. If at the end of the second year the life expectancy of the company is still ten years, the original cost must be reapportioned over twelve years and ten such payments discounted. Continuing from year to year, the investment level drops with decreasing speed as shown by curve (3) in Fig. 1.[11] When liquidation becomes a definite future event, instead of merely a risk to be provided for, no revision of the apportionment will be made and the amortization curve (3) will bend toward zero ten years hence, as indicated in Fig. 1 at the ten-year point (curve 4).

As the third example, an item of equipment may be selected which has a long life and is subject only to comparatively slow depreciation. The exchange value, for instance, may not reach scrap value for forty years, although it will always be lower than use value. Statistical research shows that the mortality of physical property is subject to the same laws which govern human lives, except that the correspondence between the theory of probability and practical experience is closer because the phenomenon of high infant mortality arises only in the case of human beings.[12]

The mortality curve shown in Fig. 2 (1) is a cumulative frequency distribution of a special kind,[13] which appears better adapted to the problem than the cumulative normal curve of error. The ordinates show the chance of survival *per centum* at the various ages marked on the axis of abscissa. By summing up the entire area below the mortality curve, the average life (3) of the asset is obtained, which is in this case twenty years. When the asset is new, that is its life expectancy. As it grows older, the expectancy remaining at successive ages is found by

[11] If C_0 be the cost of an asset having no exchange value, but a life coextensive with that of the company and if the annual services are equal in magnitude, the figure C_t at which it ought to be stated in the balance sheet, is:

$$C_t = C_0 \frac{1 - \dfrac{1}{(1+i)^n}}{1 - \dfrac{1}{(1+i)^{n+t}}}$$

In this formula i is the money rate, n the life expectancy or horizon of the company, and t the number of times (years) the expectancy was revised, *i.e.*, extended, since acquisition of the asset. Applying the theory of limits to the special case $i=0$, the same formula without interest becomes $C_t = C_0 n/(n+t)$. This formula is applied in Fig. 1 for the construction of curve (5).

[12] *Cf.* E. B. Kurtz: *Life Expectancy of Physical Property*, Ronald Press Co., New York, 1930.

[13] The cumulative curve VII (a form of the Pearsonian curve I) used by Kurtz. *Ibid.*, p. 90 and table 50, p. 170.

computing the area of the mortality curve to the right of each age. The result, *per centum* of the total area, is plotted horizontally by adding it to the age on the level of the corresponding chance of survival. This gives the probable life curve (2). For instance, if the asset has reached the age of on the right. The next step is to compute the remaining cost (6) at all ages. It is done by multiplying the remaining services (4) by the difference between 100% and the exchange value *per centum* (5) and then adding the latter again. If the investment is desired, interest must be considered in the computa-

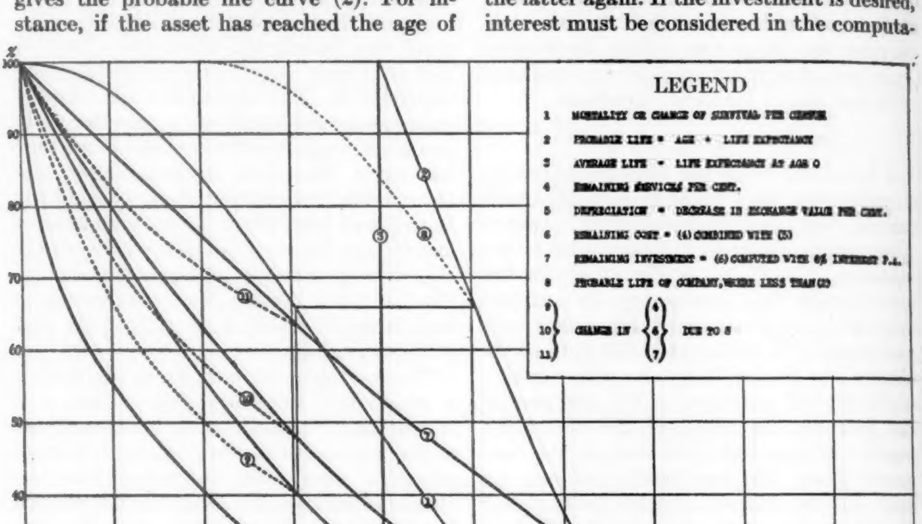

FIG. 2

ten years, it may be expected to live 12½ years longer; if it has survived twenty years, its expectancy is eight years more; and so on until the maximal age is reached. The sum of expectancy and age is the probable life. Terminology and method are the same as those used in human mortality studies.

The life expectancy at successive ages divided by the corresponding probable life gives the remaining services of the asset in terms of a total of 100%. This information is plotted vertically in Fig. 2 (4), descending from the upper left hand corner toward zero tion. This phase of the problem does not appear to have received as much attention from engineers, perhaps because they are not primarily interested in investment valuations. The theory has been outlined in the preceding section entitled, "The Method of Amortization," but may be illustrated by concrete data. At the age of twenty years, for instance, the asset is expected to last eight years longer. Presumably, therefore, it will be sold at the age of 28 years when, according to the depreciation curve (5), it will be worth 11.2% of its original cost. Dis-

counting this figure at 6% for 28 years gives 2.09%, which means that 97.91% of the total cost must be allocated to 28 years of service. One payment of a 28-year annuity which 97.91 will purchase is 7.3 and the present worth of eight such payments is 45.5. Adding the present value of 11.2 due eight years hence, *viz.*, 7.0, results in the answer required, namely, that the investment in the asset at the end of the twentieth year is 52.5% of its original cost. Upon repeating the computation at suitable intervals, the investment or amortization curve (7) can be plotted.

If the life expectancy of the company is more than twenty years, there will be no interference with the independent calculation of amortization. Assuming, however, for the sake of illustration, that it is only ten years, the expectancy of the asset must be reduced to that figure, wherever it is greater. The upper portion of the mortality curve has accordingly been recopied ten years to the right (8) to supplant the corresponding portion of the probable life curve. The resultant indentions of the remaining service, cost, and investment curves are shown as dotted lines, which extend to about the fifteenth year.[14] Beyond that age the life expectancy of the asset is below ten years, so that the company's life has no further effect, unless its expectancy has also decreased in the meantime.

COMPOSITE AMORTIZATION

In Fig. 2 only a single and slowly wasting item of equipment was considered. It might have dropped out of service at any time, the probability of such an event being expressed by the mortality curve. What has been done there was to make only that provision for amortization which is "probably" sufficient, but not necessarily so. In the case of a large plant, consisting of many similar items of machinery, the problem is somewhat different. The more numerous the items are, the closer will the number of those actually dropping out of service correspond to the number called for by the mortality curve. For locomotives, rolling stock, pumps, telegraph poles, *etc.*, a most remarkable correspondence between theory and practice has been observed.[15]

The amortization of a composite plant is illustrated in Fig. 3. Individual units are continuously discarded and replaced. Upon disposal all units have only a scrap value of 20% regardless of their age; the depreciation curve (5), therefore, is a horizontal line. The mortality (1) and probable life (2) curves are similar to those of Fig 2, except that the average life is only ten years. The rate at which units drop out of service is shown at the bottom of the chart; the replacements of the original units form the basic frequency distribution (8) the summation of which is the mortality curve. In addition to original units, replacements must also be replaced, so that the replacement rate (9) gradually stabilizes itself around the 10% level, corresponding to the average life of ten years.

The remaining service (4) remaining cost (6) and amortization (7) curves have been plotted as outlined for Fig. 2. Each block of annual replacements will have reached a different stage in this respect. At the end of the tenth year, for instance, the plant will be composed of about 48% of original units, plus 52% of the first year's replacements, plus 59% of the second, plus 67% of the third, and so on, the weighted total being always 100%. Correspondingly, the original units will represent a remaining service of 29%, a cost of 43%, and an investment of 50%; the first year's replacements, a remaining service of 31%, a cost of 45%, and an investment of 51%; and so on. The averages of all these data, weighted by the size of the respective blocks, give the composite service, cost, and investment remaining in the entire plant. The composite services without scrap value have not been plotted; the two other curves (10) and (11) start in the upper left hand corner of the chart, reach their lowest points at the end of the tenth year and become gradually stabilized at a slightly higher level, corresponding to an average age of 5.1 years and an average

[14] In strict mathematical theory this method is not entirely correct, but will serve as a satisfactory approximation.

[15] *Cf.* Charts and tables of actual experience presented by Kurtz, *op. cit.*

life expectancy of 6.2 years. These figures are obtained by tracing the level of the composite remaining cost from the infinitely distant future back to the remaining cost curve of a unit, proceeding from there along the 5.1 year ordinate to the mortality curve and drawing the horizontal line of probable life at that point. The same result will be obtained by tracing the level of the composite investment curve to the unit investment curve. The intersection lies on the same 5.1 year ordinate.

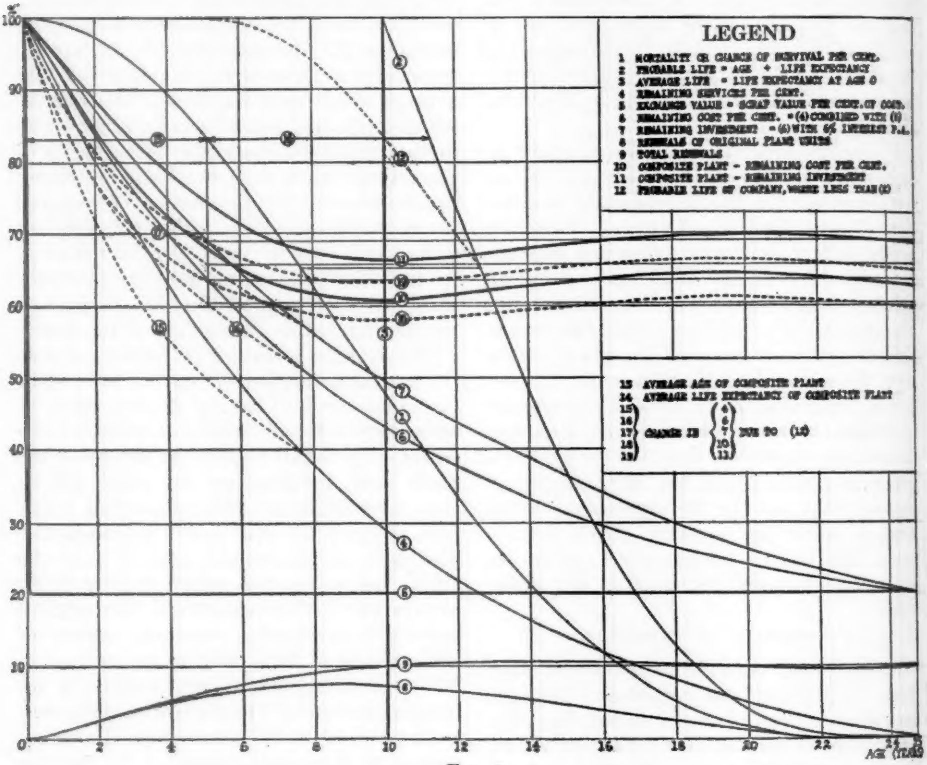

FIG. 3

Ordinarily the company's horizon is not apt to be less than ten years; nevertheless, to show what would happen if it were less, say five years, the cost and investment curves have been computed for this assumption also. It may be seen that their trend is again horizontal; introduction of the company's life expectancy into the problem will not reduce the plant to its scrap value, but will merely maintain it at the proper number of years' distance from scrap. The drop of the level is not proportionate, because the original cost had to be distributed over a shorter probable life, and in the case of the investment curve the scrap value was also discounted for a shorter period. The result is a higher present worth for both services and scrap which partly offsets the reduction in the length of the annuity discounted. The scrap value assumed in Fig. 3 has a great influence in this respect, because it is unusually high. If the plant is expanding, the compound amount of expansion must be added to the replacements. This will give an ascending trend to both the replacement and the cost or investment curves.

AMORTIZATION OF INVESTMENTS IN GOODWILL

If goodwill has been purchased on the basis of a careful and unbiased calculation, the data so obtained may be used for purposes of amortization. All that is necessary is to sum up the area below the discounted mortality curve to the right of each age and plot vertically the result *per centum* plus compound interest for those ages. Goodwill conceivably behaves like a large number of small original plant units taken together. Individual units will drop out of service in accordance with the mortality curve. The only difference is that good will has no scrap value. The plotting of the probable life curve and the computation from it of the curves of remaining services (cost) and investment per unit at successive ages are similar to the principles explained above. Multiplying the last curve by the number of units still in service, *i.e.*, by the ordinates of the mortality curve, produces the total investment curve.

Reference to the composite plant charted in Fig. 3 inevitably leads to the question of whether or not it is possible to replace goodwill in the same manner in which plant units are replaced. Theoretically it ought to be possible; in practice, however, the successive items added will seldom be sufficiently numerous or uniform. It seems preferable, therefore, to let each item of purchased or created good will and other deferred charge stand separately on its own merits, subject to corresponding amortization. The limitations imposed by the company's own life expectancy must be observed in all cases.

When purchased good will is not *bona fide*, but represents mere overcapitalization, there is a great deal to be said for *Canning's* insistence that "there is no possible excuse for perpetuating a gross blunder or the results of a misdeed in asset valuations."[16] That is particularly true in the public utility field, where the misdeed becomes a permanent source of revenue. In competitive business, accuracy is a goal equally worth striving for, but even if corporation laws were drastically revised, there would always remain a range of reasonable doubt within which the valuations made might be suspected, but not upset. For this reason I do not agree that to distribute overvaluation over a future period is a statistical error for which no valid excuse can be presented.[16] On the contrary, the knowledge that amortization is as certain as the proverbial death and taxes, will itself restrict opportunities for abuse. To the investor, on to whom the organizers have unloaded the stock, the fictitious valuation is an actual investment. All he must understand is that the cake of excess profits has been eaten and that only the crumbs were left for him. It is the omission of adequate amortization from prospectuses forecasting future profits, which magnifies these crumbs into a semblance of the cake which he will never enjoy.

Until allegedly *bona fide* computations of good will can be checked by reference to statistical data and until abuses in reorganization can be effectively stopped, it may perhaps be best to treat all such deferred charges as if they were organization expenses having a life coextensive with that of the company. Uniformity will at least be gained in this manner.

TIME-SHAPE OF SERVICES

To simplify the presentation of the actuarial theory of life expectancy in Figs. 2 and 3, the services of various assets were regarded as evenly distributed over their useful lives. In practice, that is seldom the case. Two main types of behavior may be distinguished in this respect. Certain assets have a more or less limited total capacity for rendering service, the average of which is known from experience. If the intensity of their use or exploitation varies greatly from time to time, it will be better to base the mortality study upon units of production in terms of the total expected. That is done in several industries. The considerations which tip the scales in favor of one method or the other can not be discussed here. Suffice it to say that if the abscissa of the mortality curve measures production units instead of time, a scale of time distorted in accordance with expected variations in productive intensity

[16] *Op. cit.*, p. 248.

must, nevertheless, be superimposed upon it to permit the computation of the investment remaining in the services not yet rendered.

Another class of assets has a capacity for service which is limited only by the opportunities for rendering it. Those commonly described as "intangibles" are in this group, *viz.*, patents, trade marks, copyrights, preliminary expenses, *etc.* As the recorded cost of such assets is frequently not *bona fide*, the inclination to refer to their services as "burdens" may be difficult to resist, but the change in name does not invalidate the general principle of amortization, intent upon insuring the stockholder's recorded equity against loss from liquidation. These services or burdens must be distributed in accordance with the opportunities to render them or the ability to bear them, whichever terminology be preferred. In other words, if the company is growing, the rate of growth should be considered. For this purpose the single horizon may no longer be an acceptable indicator of risk, because expansion has its own horizon. The distribution may accordingly be governed by a two-horizon method. Until research sheds more light upon the risk involved, the expansion horizon can only be estimated, but a careful estimate will give a more accurate result than mere scorn for all theory.[17]

The two main types of assets and their subdivisions deserve a great deal more attention than can be given them here. Assets with a limited total capacity for service often show a gradual decline in efficiency, so that their successive annual services may not be considered equal, even if opportunities for rendering them do not vary. The rate of decline will then influence the distribution.[18] Patents and copyrights expire within certain legal limits, but their true expectancy of service may justify a distribution over a shorter period. On the other hand, if the life expectancy of the business is shorter than that period, the residual exchange values on the horizon enter into the problem. The life expectancy of trade marks and trade names is limited by that of the company and there is no scrap value wherever the legal rule prevails that assignments in gross are void.[19] The illustrations given in preceding paragraphs indicate the general approach, which must be suitably modified for special cases.

APPRECIATION

Exchange values need be considered only as of the future dates when exchange is expected to take place either in the normal course of business or by way of insurance against the risk of liquidation. General hints have already been given about the valuation of current assets and liabilities. From them it is possible to deduce the rules governing other cases; for instance, when demand deposits earn a low rate of interest or when accounts, notes, and bonds receivable or payable call for a higher or lower rate than the one used in their valuation.

The exchange value of machinery, equipment, *etc.*, on the date when their sale is contemplated is ordinarily so small a portion of the original cost that normal fluctuations of exchange values will have only a negligible influence upon the apportionment of cost to services. It will seldom be necessary to revise the original estimate of scrap value for a composite plant. Gains or losses are, instead, absorbed currently, as they arise. The

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[17] The recognition of expansion (x) will change the formula of note 11 into the following, wherein h=horizon of excess earnings and k=horizon of expansion:

$$C_t=C_0(1+x)^t\frac{\dfrac{x}{i}\left(\dfrac{1+x}{1+i}\right)^h+\left(1-\dfrac{x}{i}\right)\dfrac{(1+x)^h}{(1+i)^h}-1}{\dfrac{x}{i}\left(\dfrac{1+x}{1+i}\right)^{h+t}+\left(1-\dfrac{x}{i}\right)\dfrac{(1+x)^{h+t}}{(1+i)^{h+t}}-1},$$

This expression may be suitably reduced.

[18] Maintenance and repair charges as well as taxes and insurance may properly be considered in the computation of the net services rendered in successive periods. See Harold Hotelling: "A General Mathematical Theory of Depreciation," *Journal of The American Statistical Association*, Sept., 1925, pp. 340–353. For the sake of giving a plausible illustration, Hotelling assumes that repairs depend upon age, and taxes and insurance upon residual value. This does not justify Canning's criticism (*op. cit.*, p. 298) that the integral equation presented by Hotelling will work only in the assumed case. The equation states the general problem in terms of symbols representing the variables as unknown functions of time. If anyone does not like the known functions tentatively substituted, he may readily substitute others acceptable to him. The solution will fit the case he has in mind.

[19] *Cf.* my article on "The Law of Goodwill," ACCOUNTING REVIEW, Dec., 1936, pp. 317–329.

greater the number of units in service, the less significant the distortion of earnings arising from this source.

More attention must be given to single large and slowly wasting items of investment. The extreme example is land, the cost of which often represents the present worth of perpetual service. Even then, however, the technique of apportionment is the same as for other assets. Under the investment-concept of the balance sheet the difference between cost and the net selling price looming upon the receding horizon must be distributed over the services rendered between the date of purchase and the horizon. So long as the trend of land values is horizontal, the charge for each annual service equals the credit to interest on investment and the land remains recorded at cost. If the trend is rising, the cost of each service is less than the credit to interest on investment, and the difference may be added to the cost of land. Should the slope of the trend equal the combined rate of interest and taxes, the services will cost nothing.

For cost accounting purposes appreciation may be disregarded, but it constitutes nevertheless a gain connected with manufacturing, until the point is reached where the selling price upon the horizon would pay for a comparable location plus the expense of tearing down the plant and moving the equipment. If no such action is taken, the company will thereafter be engaged in two separate ventures: one manufacturing and the other a real estate speculation, each of which calls for separate records. In the manufacturing division the book value of the land must be kept at the balancing point, which will change with changing opportunities for removal.

The real estate venture may be recorded by either the direct or the indirect method; preferably by both, supplemented further by copious explanation.[20] The direct method will consist of tracing the changing present worth of the selling price and deducting the value recorded in the manufacturing division. As for the indirect method, it will be limited to capitalizing taxes and assessments not chargeable to manufacturing and to compounding interest on these expenditures. Or interest may be omitted in both instances. In an extreme case the facts will generally be easier to understand than the method of their recording. This should be borne in mind because any method is valuable only in proportion to its ability to simplify facts, and to permit conclusions to be drawn from them.

The date of sale which will yield the greatest profit is located at the point where the declining rate of appreciation becomes equal to the combined rate of interest and taxes on the value estimated by the direct method. This date is the logical horizon for manufacturing purposes, unless it is so far distant that the risk of manufacturing calls for a shorter period.

When the purchasing power of money shows a definite trend of change or fluctuates too widely, it may become necessary to adjust accounts by reference to some general price index.[21] The true appreciation or depreciation of a specific asset can then be measured more accurately.

A different form of appreciation occurs when exploration is rewarded by a valuable discovery. The same technique of apportionment could again be applied and would furnish a mathematically correct presentation, but such a method of gradual negative amortization would, nevertheless, look highly artificial and contrary to common sense. It is far more reasonable to adopt the position that exploration is one kind of business activity and the exploitation of discoveries quite another. Reorganizations have been effected for less weighty reasons. And even if the legal corporate entity happens to remain unchanged,[22] there can be no valid ob-

[20] In discussing this subject, I have in mind an extreme case within my own experience, where the land rose about a hundredfold in value while the company continued manufacturing operations at a declining profit. In the end practically the entire value of the stock was attributable to the land.

[21] *Cf.* H. W. Sweeney: *Stabilized Accounting*, Harper & Bros., New York, 1936.

[22] I again have in mind a case within my experience, where an oil well was discovered and appraised at forty times the cost of the land and its exploration. A share was quoted in the market at forty-three times the capital paid in and the first years profits equalled twice the recorded book equity.

jection to a careful allocation of the rewards to their respective sources. For this reason I do not quite understand why *May* calls discovery values "perhaps the most phantastic of all,"[23] unless he means merely that there is too much room for fancy in the appraisal.[24] All appraisals, of course, are "for experts of good character only,"[25] but the play of fancy will be greatly restricted by well-defined and enforced principles of amortization fully understood in advance.

INTEREST AND ITS LIMITATIONS

It is a curious phenomenon that many writers, in discussing the place of interest in valuation, devote more space to witty, but misleading remarks than to an exposition of its limitations. Interest can not be disposed of merely by saying that "it is as absurd as trying to correct for the earth's rotation in a snowball fight" or that "all we should have to do to earn rate *i* forever would be to abandon the plant." And when the "muddy pool of interest" is mentioned, it is difficult to resist the temptation of retorting that the appearance of muddiness may be due to the condition of the eye rather than to that of the pool.

The opponents of interest really have an argument stronger than any of those which they have mentioned so far, to my knowledge. A fundamental truth about accounting is that, given perfect and unlimited foresight, no matter at what value an asset is placed on the books and no matter in what haphazard way it is amortized over its unexpired life, the discounted excess profits plus the recorded value will always give the true fair market value, even though both the investment and the excess profits are measured incorrectly. This statement is a simple theorem of arithmetic.

Risk being disregarded for the time being, the only basic facts are the life of the asset and the proceeds of its services. Let us place the life at four years and let us assume that the proceeds are $500, $600, $900 and $700 for the successive years. Valuing now the asset at any random figure and filling in annual amortization (cost) likewise at random, a table may be completed as follows:

TABLE 1

Principal	Services: Cost	Services: Proceeds	Profit: Total	Profit: Normal	Profit: Excess
$1,000	$ 300	$ 500	$ 200	$ 50	$ 150
700	100	600	500	35	465
600	200	900	700	30	670
400	400	700	300	20	280
—	$1,000	$2,700	$1,700	$135	$1,565

Or, if preferred—

TABLE 2

Principal	Services: Cost	Services: Proceeds	Profit: Total	Profit: Normal	Profit: Excess
$200,000	$ 20,000	$ 500	$− 19,500	$10,000	$− 29,500
180,000	80,000	600	− 79,400	9,000	− 88,400
100,000	30,000	900	− 29,100	5,000	− 34,100
70,000	70,000	700	− 69,300	3,500	− 72,800
—	$200,000	$2,700	$−197,300	$27,500	$−224,800

The random figures of amortization may be taken to represent more or less profound theories of distribution. Irrespective of their merit, the fair market value of the asset can be computed correctly from either table. It is $2,373.75. If interest were used in the distribution of cost, the answer would still be the same. It follows that interest may be disregarded in the process of preparing accounting statements which have only the limited purpose of permitting a correct appraisal of the fair market value.

[23] *Op. cit.*, p. 17.

[24] See the recognition and measurement of discovery value under successive revenue acts and treasury regulations.

[25] Canning, *op. cit.*, p. 305.

The inclusion of interest has only one primary advantage: The true investment and the true goodwill can be separated only by allocating both cost and interest to future services. When used jointly with a measure of risk, interest will, therefore, partly remedy the complaint that "book figures may be reasonably satisfactory for current assets, but the recorded data of fixed property are usually inadequate for the purpose of a qualitative analysis of earning power."[26] But if risk can be omitted from consideration and if only the sum of investment and goodwill is desired, almost any method will give the correct primary result.

The rate of interest to be used is evidently the riskless rate which the market itself uses in valuing common stocks. The average level of that rate can be determined with sufficient accuracy[27] to preclude any wide divergence of opinion. And if the rate and amount of interest included in asset figures are disclosed, adjustment by interpolation is an easy task for anyone who prefers a slightly different rate. The requirement of full disclosure will also eliminate temptation.

THE GENERAL BUSINESS RISK

To introduce the concept of risk into the valuation problem means to limit perfect foresight to a short future period. This is merely a way of averaging unlimited, but imperfect foresight. Typical examples have already been presented graphically, but a review by figures appears indicated. To save computation, a very simple example must be selected. A certain amount of harmless distortion will result, which may serve to emphasize the principle involved.

Let the unit to be valued consist of an asset having a fixed ten-year life and of another having a life coextensive with that of the company, whose expectancy is limited to five years. Each asset cost $1,000. Under accounting methods now in vogue the table of amortization would be as follows:

TABLE 3

Year	*Book Value*	*Services*		*Profit*			*Apparent Market Value*
		Cost	*Proceeds*	*Total*	*Normal*	*Excess*	
1	$2,000.00	$ 100.00	$ 250.00	$ 150.00	$100.00	$ 50.00	$2,041.09
2	1,900.00	100.00	220.00	120.00	95.00	25.00	1,912.09
3	1,800.00	100.00	180.00	80.00	90.00	− 10.00	1,827.55
4	1,700.00	100.00	160.00	60.00	85.00	− 25.00	1,797.67
5	1,600.00	100.00	180.00	80.00	80.00	—	1,805.92
6	1,500.00	100.00	200.00	100.00	75.00	25.00	983.62
7	1,400.00	100.00	220.00	120.00	70.00	50.00	832.80
8	1,300.00	100.00	240.00	140.00	65.00	75.00	654.44
9	1,200.00	100.00	260.00	160.00	60.00	100.00	447.17
10	1,100.00	1,100.00	220.00	−880.00	55.00	−935.00	209.52
	—	$2,000.00	$2,130.00	$ 130.00	$775.00	$−645.00	—

The computation of the apparent fair market value is based, in accordance with the assumption, upon the next five years' excess profits ahead at each successive date. It may be seen that this method of bookkeeping grossly overstates the market value until the end is in sight. Thereafter the figures are correct. When books are kept in this manner, the market will sooner or later learn to disregard them. Appraisal on the basis of rumors and "tips" is the natural consequence.

If risk is now considered, but interest is still omitted, the following figures will be obtained:

[26] W. A. Paton: "The valuation of the business enterprise," *Accounting Review*, March, 1936, pp. 29–30. That portion of the complaint which refers to the change in the purchasing power of money will, of course, remain in force and calls for separate correction. *Cf.* note 21.

[27] For instance, by analyzing well known seasoned stocks which have long been earning less than the money rate. The horizon can there be considered infinite, and, therefore, their yield must equal the money rate, subject only to minor disturbing factors, which can be eliminated if a sufficient number of observations is analyzed.

TABLE 4

Year	Book Value	Services		Profit			Correct Market Value
		Cost	Proceeds	Total	Normal	Excess	
1	$2,000.00	$ 333.33	$ 250.00	$− 83.33	$100.00	$−183.33	$865.79
2	1,666.67	238.10	220.00	− 18.10	83.33	−101.43	815.80
3	1,428.57	178.57	180.00	1.43	71.43	− 70.00	808.96
4	1,250.00	138.89	160.00	21.11	62.50	− 41.39	857.45
5	1,111.11	111.11	180.00	68.89	55.56	13.33	944.05
6	1,000.00	200.00	200.00	—	50.00	− 50.00	983.62
7	800.00	200.00	220.00	20.00	40.00	− 20.00	832.80
8	600.00	200.00	240.00	40.00	30.00	10.00	654.44
9	400.00	200.00	260.00	60.00	20.00	40.00	447.17
10	200.00	200.00	220.00	20.00	10.00	10.00	209.52
	—	$2,000.00	$2,130.00	$ 130.00	$522.82	$−392.82	—

Every line of this table is taken from corresponding primary tables prepared by using a different combination of foresight and hindsight for each. For instance, the second line of Table 4 is the second line of a six-year table combining one year of hindsight with five years of foresight. Similarly, the ninth line involves eight years of hindsight and two years of foresight. The fair market values now found are correct, but they must be calculated from the primary tables, not from Table 4 itself.

If it is desired to separate investment from goodwill, the ten primary tables must be computed by using interest in the distribution of cost. The result will be:

TABLE 5

Year	Book Value	Goodwill	Market Value
1	$2,000.00	$−1,134.21	$865.79
2	1,705.97	− 890.17	815.80
3	1,496.44	− 687.48	808.96
4	1,339.74	− 482.29	857.45
5	1,218.23	− 274.18	944.05
6	1,121.38	− 137.76	983.62
7	918.43	− 85.63	832.80
8	705.34	− 50.90	654.44
9	481.60	− 34.43	447.17
10	246.67	− 37.15	209.52

For the purpose of the example, the horizon had to be assumed. Actually, it depends partly upon the nature of the business, partly upon special information relative to the future and partly upon the rate of return and the changes expected in it. A secondary advantage of including interest in the computation is that, by correctly stating the investment in the services expected, it will eliminate that part of the error in estimating the risk which is due to incorrectly computed rates of return.

The amortization enforced by the horizon of the business is a premium paid for insuring the book equity against loss upon liquidation. As in the case of natural persons, the company does not actually expect to die so soon; nevertheless, the horizon measures the risk that it might. The correctness of the premium charged in a given case may be checked roughly by using what appears to be an appropriate horizon for the computation of the market price from book figures. Until the legal phrase "suitable and proper"[28] can be made more definite by applying statistical methods, a range of doubt will remain open; in many instances, however, the discrepancy is so great that it can be immediately spotted.

THE FORMULA-REVERSAL TEST

To illustrate the application of the valuation formulae, let us select at random the unexpired portion of the primary table upon which line 3 of Table 5 is based (Table 6).

The negative good will at the beginning of the third year is $687.48. The average excess profit for each year, therefore, is one payment of an annuity which that sum can purchase, *viz.*, $−158.79. Subtracting normal profits gives an average net loss of $83.97. Accordingly, the fair market value may be computed as follows:

[28] Cf. Note 19.

$$-158.97\frac{1-\frac{1}{1.05^5}}{.05}+1{,}496.44=808.96$$

From this method, it is not proper to jump to the conclusion that the horizon refers to excess profits only and not to the life of the business itself. The computation can be readily converted into

$$-83.97\frac{1-\frac{1}{1.05^5}}{.05}+\frac{1{,}496.44}{1.05^5}=808.96.$$

Now, the formula states clearly that the entire investment is repayable upon the horizon. Both varieties of the formula, of course, express a fiction obtained by substituting earnings, *i.e.*, "standard income," for the actual stream of services coming in.[29] The fiction was created for the purpose of permitting the investor to rely upon the recorded book equity and to compute the capital value from it. Figures closer to reality are used in the service formula preferred by economists. The average service in the example is \$345.64 − \$158.79 = \$186.85. Therefore—

$$186.85\frac{1-\frac{1}{1.05^5}}{.05}=808.96.$$

Here the book equity is not mentioned at all. If the asset will ultimately be reduced to salable scrap, only the present worth of that can receive consideration. The horizon-theory or liquidation insurance presented in this article rests ultimately upon the equivalence or interchangeability of the three formulae, or two viewpoints.

Table 6

Year	Book Value	Services			Profits		
		Amortization	*Cost*	*Proceeds*	*Excess*	*Normal*	*Total*
3	\$1,496.44	\$ 270.81	\$ 345.63	\$180.00	\$−165.63	\$ 74.82	\$− 90.81
4	1,225.63	284.36	345.64	160.00	−185.64	61.28	−124.36
5	941.27	298.58	345.64	180.00	−165.64	47.06	−118.58
6	642.69	313.51	345.64	200.00	−145.64	32.13	−113.51
7	329.18	329.18	345.64	220.00	−125.64	16.46	−109.18
	—	\$1,496.44	\$1,728.19	\$940.00	\$−788.19	\$231.75	\$−556.44

When the annual volume of production is not constant, the averaging process is somewhat more complicated. If the increase is such that the fitting of a compound expansion curve is reasonable, the rate of expansion may be so found. A fairly accurate expansion rate can also be derived from the gross (undepreciated) book value of a composite plant, after it has been in operation long enough enough to have a stable renewal rate (see Fig. 3). By dividing an annuity growing at the expansion rate into the present worth of excess profits, adding the normal profit of the first year and dividing the result by the book equity at the beginning, the average earning rate is obtained. Alternatively, the net cash dividend rate (subscriptions, assessments, *etc.*, being considered negative dividends) may be computed and added to the expansion rate to find the earning rate. Choosing now an appropriate horizon, the appraisal can proceed.[30]

[29] Irving Fisher defines standard income as "that income which capital can yield without alteration of value." *Cf. The Nature of Capital and Income*, p. 333.

[30] The service formula is as follows, when r = earning rate, x = expansion rate, $r-x$ = services, a = amortization and s = scrap value:

$$P=\frac{r-x+a}{x-i}\left[\left(\frac{1+x}{1+i}\right)^n-1\right]+s\left(\frac{1+x}{1+i}\right)^n$$

The formula of amortization is:

$$a=(1-s)\frac{x-i}{1-\left(\frac{1+i}{1+x}\right)^n}$$

The assumption here is that the horizon (n) of earning and expansion rates is the same. If that is unlikely, the amortization can be obtained from a two-horizon formula.

Comparison of the appraisal so derived from past book figures with the trend of market prices for the same period makes it possible to estimate with a fair degree of accuracy, first, that portion of the book equity upon which redemption service has been maintained and, second, what the true return would have been under full redemption service.

SUMMARY OF THE INVESTMENT-CONCEPT

The investment-concept of the balance sheet may be restated briefly as follows:

1. Asset figures are obtained by either the direct or the indirect method of valuation. The difference between the two is that the former proceeds backward from the next future starting point of the operating cycle, whereas the latter moves forward from the last starting point. This point is the moment when cash is disbursed.

2. The dividing line between direct and indirect valuation is the line of realization. Above the line, assets are stated at their fair market or capital values, while below it merely unexpired past costs (including time-cost) are recorded for the purpose of submitting them to the market for appraisal on the basis of their earning power.

3. The exact point where the realization line ought to be drawn depends upon conditions prevailing in different industries; these conditions determine the degree of accuracy with which the value of future services can be foretold. The degree of accuracy, in turn, determines the choice of the method. In most cases, inventories will be found next to the line, on either or both sides of it.

4. It is not necessarily true that any asset capable of direct valuation should be so valued. Uniformity of classification will often be preferable. In many cases services in exchange are best valued by the direct method and services in use by the indirect method.

5. Each asset has its own horizon or life expectancy. The horizon of current assets is the sum of all turnover periods which separate them from the date when their proceeds are again disbursed (*cf.* page 211). The expectancy of the so-called fixed assets can be found from mortality studies.

6. Paramount over all horizons of individual assets is the life-expectancy of the company itself. Beyond the limit so set, an asset can not be expected to render services in use, but merely a final service in exchange.

The horizon of the business enterprise is the least definite element entering into the investment concept, but a very essential one, upon which research is sorely needed. Fortunately a high degree of correlation evidently exists between this horizon and the "average life"[31] of the principal items of equipment used in industry, because the more or less substantial nature of such equipment is determined chiefly by the prevailing business risk. For this reason the horizon of an enterprise is not apt to interfere with the independent amortization of plant assets so long as normal operating conditions exist. Its principal practical significance is probably limited to actually impending liquidation and to the amortization of assets or burdens having an indefinite life.

OTHER BALANCE SHEET CONCEPTS

The capital-value, property, or true-net-worth concept of the balance sheet is strenuously opposed on the ground that appraisal is not a function of accounting. This position is probably well taken although—wherever business risks are not adequately considered in selecting the type of equipment, *i.e.*, where the horizon of the business is shorter than the "average life"[31] of such equipment, the best way of disclosing how amortization was determined would be to compute annually *Canning's* "master valuation account."[32] In this manner it could easily be shown what the capital value of the business would have to be if the assumptions made in keeping the books were correct and if last year's profit were considered a correct average in the sense explained in the section entitled, "The Formula-Reversal Test." Indeed, if such a test were appended to every balance sheet which is nowadays blandly certified, the frequently ludicrous discrepancy between actual market quotations and the result of the test would forcibly call

[31] *Viz.* life expectancy at the age zero. *Cf.* the preceding section entitled "Examples of Amortization."

[32] *Op. cit.*, p. 42.

attention to the fact that something is radically wrong either with the market or with the books and the methods by which they are kept. A single test might not be conclusive; within a few years, however, it would inevitably appear who is right and who is not.

Quite apart from this suggestion it must be admitted that the investment concept can render valuable service in the public utility field by placing regulation on an unequivocal basis. That seems true especially because in the general case the horizon of earnings could be considered infinite, so that only the minor problem of the expansion horizon would remain. Furthermore, public utilities are entitled to a stated fair return, so that deviations from it are really assets or liabilities, as the case may be.

In all cases where it is not essential to measure the exact investment and the exact rate of return from year to year, interest may immediately be omitted. This will cause only a small conservative bias in estimating the horizon. The main problem of the horizon still remains, however, because when foresight does not extend beyond the "average life"[31] of the most durable asset, the shifting of the horizon from one set of services to the next makes it impossible to compute the fair market value from successive reports. This was pointed out with reference to Tables 4 and 5. Assets or deferred charges having an indefinite life always create this error, and this is the true, although perhaps not generally realized reason for the rule often preached, but seldom practised, that purchased goodwill, etc., ought to be separately stated on the balance sheet.

The mere segregation of such items will do no good, however, unless every reader of a balance sheet fully understands what that form of disclosure means. Another horizontal line has in effect been drawn, separating self-liquidating assets from those which are excluded from gradual redemption and are branded instead as ultimate deficits. If all assets having an "average life"[31] longer than the corporate horizon are placed below the line of redemption service and are thereby excluded from consideration in the valuation process, the remainder of the book equity and the excess profits computed thereon in successive years will regain their faculty of giving the true fair market value, subject only to errors of foresight, but to no mechanical flaw of procedure.

The policy of banishing certain capital expenditures below the redemption line can be carried much further. A great deal, for instance, could be said in favor of the idea that items above the line shall present liquidating values only, *i.e.*, net selling prices of all assets looming either upon their own horizons or upon that of the company, whichever be shorter. Upon acquisition the cost of an asset could be apportioned immediately to both sides of the line. Depreciation tables, based upon market statistics of second-hand equipment—not upon any theory of use value to the present owner—would be needed for the annual adjustment of the figures above the line. The amount of the adjustment could be transferred below or written off altogether, since for valuation purposes what happens to it is irrelevant. The income account, in turn, would have to emphasize the net potential service, *i.e.*, sales less operating, selling, and administrative expenses, but excluding all depreciation or amortization. This requirement is observed in an old practice now frowned upon; that of stating depreciation at the end and not in cost of sales. For valuation purposes accounts would thus revert to the fundamental formula of capital value based upon services, for which the balance sheet would furnish the second term and the income account the first. For this purpose, however, reinvestments must also be deducted from the balance of the income account. Actually, therefore, only positive or negative cash dividends enter into the formula.

Above the redemption line, which now extends to the income account also, the fiction of standard income would thus be abandoned, but that does not mean that it can not be retained with respect to the entire balance sheet and the entire income account to whatever extent such a course may seem desirable. In accordance with this theory, accountants of the old school were

in the habit of gradually "rearing up" reserves against capital expenditures by appropriating profits. In so doing, they introduced no error into the valuation formula based upon services, since the transaction took place below the redemption line. Only an improvement in the method of disclosure could have been suggested to them, namely that of stating separately the future selling prices of all assets. How the remainder of cost is recorded is entirely optional.

When "during the 1920's, accountants fell from grace and took to readjusting capital values to an extent never before attempted,"[23] their cardinal sin was failure to disclose the redemption line and to call proper attention to its significance. This omission amounts to a warranty that such adjustments do have a bearing upon the capital value of an investment, although that is not true. So long as revaluation, however questionable, is limited to manipulating debits and credits below the redemption line, the resultant harm is traceable directly to ignorance of its existence and ignorance of the economic law of capital value. On the other hand, when entries are passed between assets below the line and that portion of the income account which is above the line, the result is a misrepresentation or falsification of ascertainable facts.

Under the investment concept of the balance sheet the redemption line will disappear because full redemption service commensurate with risk becomes obligatory. That is a great advantage because there can be little doubt that the complications surrounding the line facilitate fishing in troubled waters. In the last analysis, however, no balance-sheet concept or other accounting principle can provide a safeguard unless it is applied in an intellectually, as well as legally, honest manner. That, incidentally, is a matter which might well receive a bit more attention from professional broadcasters on professional ethics.

[23] May, *op. cit.*, p. 16.

COST ACCOUNTING IN THE SIXTEENTH CENTURY

THE BOOKS OF ACCOUNT OF CHRISTOPHER PLANTIN, ANTWERP, PRINTER AND PUBLISHER*

Florence Edler

It is a generally accepted belief that cost accounting originated in the nineteenth century and received its major impulse from the development of the factory system and the extensive use of machinery in industrial production. This common opinion is only partly true. A systematic technique of cost accounting was developed during the nineteenth century and has been greatly extended in recent decades,[1] but some elements of cost accounting are much older.

Existing medieval business records show that industrial accounts were used as early as the beginning of the fourteenth century. This fact has been brought to light by recent research in old Italian account books, such as those of the Del Bene Company, Florentine importers and finishers of foreign woolen cloths in the first part of the fourteenth century;[2] Francesco Datini, Pratese merchant and manufacturer of woolen cloth at the end of that century;[3] the Medici, also

* The material for this study was collected during the author's sojourn in Belgium, 1934–36, as a Fellow of the C.R.B. Educational Foundation, Inc.

[1] A. C. Littleton: *Accounting Evolution to 1900*, New York: American Institute Publishing Co., 1933, p. 320.

[2] For industrial accounts from the books of Francesco del Bene & Co., merchants of the Calimala Gild of Florence (importers and finishers of Flemish and French cloths), see Armando Sapori, *Una Compagnia di Calimala ai primi del Trecento*, Florence: Olschki, 1932, pp. 325–343.

[3] Some pages from manufacturing accounts that illustrate clearly the existence of industrial accounting in the Prato woolen industry of the first decade of the fifteenth century are given by Gaetano Corsani in his study of the Datini account books, *I fondaci e i banchi di un mercante pratese del Trecento: Contributo alla storia della ragioneria e del commercio*, Prato: Archivio Storico Pratese, Supplement II, 1922, pp. 161–165. For informa-

woolen-cloth manufacturers, during the fifteenth and sixteenth centuries;[4] and the mint-masters of Ragusa.[5]

For the sixteenth century, examples of industrial bookeeping are also found in the records of German mining enterprises.[6]

All these examples demonstrate beyond a doubt that rudimentary forms of cost finding were commonly adopted in those industries, such as mining and textiles, which came under capitalistic control centuries before the Industrial Revolution.[7]

It is a well-known fact that thoroughly systematic bookkeeping developed first in Italy and from there spread to Northern Europe and especially to the Low Countries, where Italian methods of bookkeeping were introduced earlier than elsewhere beyond the Alps. An interesting example of the Italian influence in the Netherlands is given by a set of account books belonging to the famous Antwerp printer and publisher of the sixteenth century, Christopher Plantin. This set includes a ledger and a journal kept in double-entry form and in the Italian language. A close examination reveals that these books are kept in Venetian form, according to the rules laid down by Luca Paciolo in the first published treatise on double-entry bookkeeping, and that the books are an example of industrial accounting, this time applied to a printing and publishing house, rather than to the textile or mining industries as in the case of the other known examples. Attention has already been called to this characteristic of the Plantin account books by Raymond de Roover in a brief survey of the history of accounting in Belgium,[8] but it has seemed worthwhile to go further into the matter and to prove that in these account books a real attempt at cost finding is made.

Christopher Plantin, a Frenchman by birth, established himself in Antwerp as a printer in 1555. He was fairly successful until 1562, when he was accused of printing an heretical book. During a business trip to Paris, all of his property was seized and his equipment was sold at auction. He succeeded in clearing himself by proving that the heretical work was printed without his knowledge by one of his workmen. On his return in 1563, he had no capital with which to start his printing establishment again, so he entered into a partnership with four men of means, who had intellectual interests. Plantin's partners were two Antwerp merchants, Charles and Cornelius van Bomberghen, who were cousins; a doctor in medicine, Jean van Gorp, alias Goropius Becanus; and the Venetian merchant, Jacopo de' Schotti, who was the brother-in-law of Cornelius van Bomberghen.

The partnership existed for eight years, but it was dissolved in 1567, because the Bomberghen, who were suspected of heresy, had to leave the Netherlands upon the approach of the Duke of Alva. After 1567, Plantin did not enter into another partnership, but preferred to borrow money when he needed it for the expansion of his very successful publishing house. Philip II of Spain commissioned him to publish the *Polyglot Bible*, which was a very difficult and expensive undertaking. During his later years, Christopher Plantin received much assistance in the management of his enterprise from his son-in-law, Jean Moerentorf, alias Moretus. When Plantin died in 1589,

tion about Francesco Datini (1335?–1410), international merchant and entrepreneur, and his business records, which have come down to us almost intact and which constitute the most valuable single collection of medieval private business papers that are extant, see Robert Brun, "A Fourteenth-Century Merchant of Italy: Francesco Datini of Prato," *Journal of Economic and Business History*, II (1930), pp. 451–466.

[4] For excerpts from the Selfridge Collection of Medici Account Books, on deposit in the Harvard Graduate School of Business Administration, see Florence Edler, *Glossary of Mediaeval Terms of Business: Italian Series, 1200–1600*, Cambridge, Mass.: The Mediaeval Academy of America, 1934, Appendix II, "Medici Methods of Bookkeeping," pp. 355, 367, 383–386.

[5] C. Leyerer: "Aus dem Rechnunngsbuche der Ragusaner Münze [1422–23]," *Hochschulwissen*, VI (1929), pp. 353–358, 430–443.

[6] Balduin Penndorf: *Geschichte der Buchhaltung in Deutschland*, Leipzig, 1913, pp. 92–99.

[7] Raymond de Roover: "Aux origines d'une technique intellectuelle: la formation et l'expression de la comptabilité à parties doubles," *Annales d'histoire economique et sociale*, IX (1937), p. 295.

[8] R. de Roover: "Coup d'Oeil sur l'Histoire des Comptes en Belgique depuis le Moyen Age jusqu'a la Révolution brabançonne," *Revue Belge des Sciences Commerciales*, XII (1932), pp. 6687 f.

the Press passed to his son-in-law, Moretus, and remained in the Moretus family until the late nineteenth century.

Plantin was publisher, printer, and bookseller. He printed for his own account the books he edited, and he carried on the sale of the products of his Press at wholesale and at retail. During a quarter of a century, he was the leading printer in all of Europe. He employed regularly a staff of correctors versed in Latin, Greek, Hebrew, and other ancient languages, and a staff of compositors, printers, type-founders, and apprentices. When the Plantin Press was at the peak of its prosperity, more than a hundred men were employed, and twenty-two presses were kept busy.

Although Plantin printed some books, such as the *Polyglot Bible,* which rival in typography and scholarship the finest works of the other great printers, his chief contribution was the production of low-priced books with a high quality of workmanship; copies of the classics and of popular works in modern languages issued in inexpensive but attractive editions. In doing this, Plantin showed his ability as a business man. He adapted his printing to the demands of the public, maintaining, at the same time, a high standard of quality. In addition to classics, religious works, romances, etc., Plantin published several commercial handbooks: among them, Pierre de Savonne's treatise on bookkeeping (1567).

Owing to the fact that the Press founded by Plantin was continued by his descendants until 1876 in the very same building to which Plantin had moved it in 1576, most of the business records—account books, letters, invoices, etc.—covering a period of over three centuries, are extant. The building is now a public museum, the only printing museum in the world which is housed in a building in which the work of such a famous Press was actually carried on.

The Italian account books of the Press belonged to the partnership formed in 1563, and cover the period, 1563–1567. Before that time Plantin kept his books in single-entry and rather unmethodically. They were written in French. After the dissolution of the partnership, his son-in-law, Jean Moretus, was in charge of the bookkeeping. He returned to the use of single-entry, but he kept the books with much greater care than his father-in-law had done in the early period. Consequently, double-entry is found only in the books pertaining to the partnership. These are the books which we shall now examine.

The articles of association of the partnership are extant. According to them the capital was divided into six shares of 300 *livres de gros* (Flemish pounds) each, of which Cornelius van Bomberghen and Christopher Plantin together held three shares, and each of the other three partners one share. Plantin contributed material for the establishment, not money. The profits were to be divided pro rata. Plantin was to receive 400 florins salary per year plus an indemnity of 150 florins annually for the rental of a suitable house. The matrices of all the letters except the Hebrew ones, which were lent by the Bomberghen, belonged to Plantin and were rented to the partnership for 10 *livres de gros* per year.

Cornelius van Bomberghen was to keep the books of the partnership and was to receive an annual salary of *80 écus* for this service. He agreed to render accounts once a year, on October, to the other partners. It was also provided that Plantin was to keep accurate account of all his expenses for the Press: purchase of paper, letter fonts, purchase of manuscripts and printed books, wages paid to workmen and scholars, etc. His accounts were to be handed over regularly to Cornelius. The books kept by Cornelius are the Italian volumes—a journal and a ledger. Besides these principal account books, several others relating to the partnership still exist. They were used more or less as wastebooks or subsidiary books and contain the material on which the entries in the Italian journal and ledger are obviously based. They were kept in French and were written by the hand of Plantin himself. There is no doubt that these French books contain the accounts which Plantin was supposed to furnish to Cornelius, the bookkeeper, according to the terms of the articles

of association. On the other hand, it is quite clear, that the two Italian account books were kept under the supervision of Cornelius according to the same provisions.[9]

We are at a loss to offer a definite explanation of why these latter books were kept in Italian. It is a known fact that Italian bookkeepers were employed by Antwerp merchants.[10] Was one of them in the service of Cornelius van Bomberghen, whose business, incidentally, was the export of tapestries and other northern merchandise to Italy? This is one possibility. Another explanation is that this Italian journal and ledger were kept according to the model of the books of Daniel van Bomberghen, the father of Charles, who was for many years a printer in Venice. The truth will probably never be revealed. In any case, both books are kept according to the Venetian technique of double-entry bookkeeping as it is described and exemplified in the *Summa* of Luca Paciolo. In the entries of the Plantin journal, as in Paciolo's examples, *Per* is used to designate the account which should be debited and *A* indicates the account which should be credited. The two are only separated by two standing parallel lines, thus//. This arrangement is known as the Venetian form, whereas in Florence the two parts of a journal entry had no definite position in the text of each entry and were not so clearly separated by appropriate symbols and punctuation marks.[11] The Plantin Italian ledger also conforms to the Venetian practice described by Paciolo in chapter 15 of his treatise on bookkeeping.

The entries in the Italian journal and ledger, which were kept under the supervision of Cornelius van Bomberghen, were apparently not made day by day, but at irregular intervals of one to three months. The entries were based on the information given by Plantin, who kept his memorandum books up to date.

For a clear understanding of what will follow, it is necessary, I believe, to explain briefly the relation between the two sets of books. Plantin kept several subsidiary account books, all in single entry: (1) some kind of a journal, called *journal des affaires*, in which he made note of all his transactions: purchases of equipment and paper, sales, receipts and expenditures; (2) some kind of a ledger, called *grand livre des affaires*, wherein the same information was reproduced in a somewhat concentrated form. These two books were extensively used by Cornelius van Bomberghen or his bookkeeper in making their records. Plantin had also several other books of first entry: a wage book or *livre des ouvriers*, containing detailed records of wages paid to compositors, printers, proofreaders, artists, scholars, etc.; a *livre des libraires* containing the current accounts of bookdealers who purchased Plantin's publications; a *livre des ventes à la boutique*, or retail salesbook, recording cash sales in Plantin's own bookshop; another one, called the "Journal of C. Plantin," in which the inventory of equipment at the beginning of the partnership is recorded and which also contains miscellaneous accounts. Two books, which are lost, are also referred to: a *livre des ustensiles*, which today we should call a "plant ledger;" and a *memorial des relieurs*, containing accounts with bookbinders.

All of these books overlap to a certain extent and it must not have been an easy task to bring order out of this miscellaneous material. The keeper of the Italian ledger used principally the *journal des affaires* and the *grand livre des affaires*, but he may have consulted occasionally the other books, because Plantin knew very little about bookkeeping and his accounts were sometimes confusing. In spite of attempts to be very accurate, the bookeeper for the partnership made some mistakes, due to the confused state of Plantin's records.

In the Italian ledger, each partner is represented by a Capital Account (*conto di capitale*) for his share in the partnership. The counterpart of the shares paid for in currency were placed in the "Cash" Account.

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[9] A detailed catalogue of the business records has been published by J. Denucé, entitled *Inventaire des Archives Plantiniennes*, Antwerp, 1926.

[10] P. G. A. de Waal: "De Engelsche Vertaling van Jan Ympyn's Nieuwe Instructie," *Economisch-Historisch Jaarboek*, XVIII (1934), p. 6.

[11] Edler, *op. cit.*, pp. 373–376.

This account includes only a few other miscellaneous items and does not appear in a "Balance" made in 1565, because it was previously balanced and closed. All current receipts and expenditures made by Plantin were posted to a second account in Plantin's name, entitled *conto corrente* (Account Current), which was kept distinct from his *conto di capitale*. This Account Current practically takes the place of the "Cash" Account and records all transactions for which Plantin was held responsible. Similar arrangements are sometimes found to-day, for instance, between operating and controlling companies, especially in the shipping trade.

The names and the functions of the other ledger accounts show clearly the industrial character of the firm. Accounts called "Presses," "Type," and "Fixtures" (*masserizie della Stampa*) correspond to the accounts for equipment in modern industrial accounting. Paper accounts, for the different kinds of paper used, do not differ essentially from our present accounts for raw material. Manufacturing expenses are represented by an account called *spese di mercanzie*, to which wages paid out and other expenses were charged.

For each book, which Plantin undertook to print, a special account was opened in the ledger, for example, "Virgil in 16°," "Horace in 16°," etc. These accounts were debited for the paper used and for the wages and other expenses of printing. The paper account and the account, *spese di mercanzie*, were correspondingly credited. When the book came off the press, its special account was canceled and an account named "Books in Stock" (*libri in monte*) was debited. From this explanation it appears clear that the accounts opened for each book which was printed are the equivalent of a goods-in-process account, so common in modern industrial accounting. Finally, the account "Books in Stock" is somewhat like our modern Finished-Goods account.

The procedure which has just been summarized will now be explained step by step, in order to show that the ruling principles of cost accounting were not entirely unknown in the sixteenth century. I shall discuss successively an account for equipment (presses), one for raw material (*papier carré de Troyes*), the account for manufacturing expenses (*spese di mercanzie*), an account for goods in process (the printing of the Virgil in 16°), and the account, "Books in Stock." Then I shall give some details on the mechanism of the account called *debitori e creditori*.

As most of his equipment had been seized and sold while he was in Paris, Plantin's immediate task, after the formation of the partnership, was to repurchase and reinstall presses and other material—much of which had been bought by his friends at the auction—so that he could start printing again. Within the first three months he bought three presses. A fourth one was added a few months later. Full details regarding these purchases are given in not less than three books kept by Plantin: the *livre des ustensiles* or Plant Ledger, the Journal of C. Plantin, and the *journal des affaires*. The *livre des ustensiles* is missing, but both the other books refer to the entries made in it. In the Journal of C. Plantin, a somewhat lengthier description of each press is given by Plantin than in the *journal des affaires*. Even in the latter, full details are given, though in a shorter form, and we know exactly how much the different parts of each press cost: the ironwork, the woodwork, the copper platen, the delivery and setting up of the press, etc. According to the *journal des affaires*, the cost of the first press was 59 florins carolus and $3\frac{1}{2}$ patards. The second press cost 58 florins 10 patards.[12] In the *grand livre des affaires* all the information is summarized in a brief statement. The Italian journal gives the whole transaction in an even more condensed form, lumping the cost of the first two presses, together with a deposit paid on the third, into one entry. Here the Press Account is debited and Christopher Plantin is credited in his Account Current for the amount disbursed by

[12] In the *journal des affaires* and his subsidiary books, Plantin used the florin carolus at 20 patards as the monetary unit. In his *grand livre des affaires*, he converts the amounts from florins into Flemish pounds (*livres de gros*). One Flemish pound equaled six florins carolus. Both the Italian journal and the ledger are kept in Flemish pounds.

him. The Press Account in the Italian ledger is in the form that we should expect from the journal entries. (For excerpts from these accounts, see Appendices I, III (a), and IV (a).)

For an example of a paper account, the account entitled *papier carré fin de Troyes* has been chosen, because this paper was used for the printing of the Virgil in 16°. One hundred and ten reams of this paper were purchased from Alexander le Clercq, who was the owner of a paper mill in Troyes, France. Detailed information concerning this transaction is given by Plantin in his *journal des affaires*, where he states that the paper was bought for cash at the price of 26 patards per ream delivered in Antwerp. The purchase amounted to 143 florins plus 6 patards for delivery to the door. As in the case of the presses, the entry appears in the *grand livre des affaires* in an abridged form. In the Italian journal the account *papier carre de Troyes*, or rather *carta quadra fina de Troye*, is debited and Plantin's account is credited. (For the entries, see Appendix II.) This entry is then posted to the ledger in the usual way. It should be mentioned, however, that in the Paper Account of the ledger, a special extension column is provided for the quantities of paper, on the debit side as well as on the credit side, so that one could tell easily how much paper was on hand. (See Appendices II, III (b), IV (b).)

For the printing of the Virgil in 16°, 101 out of the 110 reams purchased from le Clercq were used. The value of the 101 reams at cost, viz. £21 s.17 d.8, was debited to the Virgil Account and credited to the Paper Account. The same procedure was followed whenever paper was taken from the stock for use in printing.

The account, *spese di mercanzie* or Manufacturing Expense, is debited for all the current expenses and wages paid by Plantin according to information given in the *journal des affaires*. Each time that Cornelius van Bomberghen brought his journal up to date, he lumped all the miscellaneous items of the period together and formed a single entry, crediting Christopher Plantin and debiting *spese di mercanzie*. (Appendix III (c).)

Plantin kept records of all the expenses and wages disbursed in connection with each edition of a book. These entries are scattered in the *journal des affaires*, but they are grouped together in the *grand livre*. According to this information, the account *spese di mercanzie* is credited and each particular edition is debited for the expenses incurred during printing. (Appendix III (d).) In the case of the Virgil in 16°, Plantin paid £8 s.19 d.8 in wages for composition and printing. This amount is transferred from *spese di mercanzie* to the ledger account, Virgil in 16°, as indicated above. (See Appendix IV (c).)

As we have seen, the Virgil account has been debited for £21 s.17 d.8 for the paper used and for £8 s.19 d.8 for wages. To these debits is added £2 s.2 d.1 for a supposed error in the price of the paper. This brings the total up to £32 s.19 d.5, which supposedly represents the cost of publication. (See Appendices III (d) and IV (d).) It should be noted that in this amount no allowance is made for the consumption of supplies such as ink, glue, thread, etc., and for overhead and depreciation charges. However, the total of £32 s.19 d.5 includes the principal direct charges. Supplies were a trifling expense in comparison with paper and wages As for depreciation, the printing industry was still in the handicraft stage, the equipment used was not very expensive, and there was no danger of its becoming obsolete, or even of its wearing out within a forseeable time. As a matter of fact, Plantin's presses are still good and, on rare occasions, the City of Antwerp uses them to print memorable addresses.

The Virgil Account is canceled by a debit to *libri in monte* or "Books in Stock" (Appendices III (e) and IV (e).) The Stock Account was debited at cost when the books came off the press and were stored. At first the books sold to dealers or to the public for cash were credited to a Sales Account entitled *carta et libri venduti* (paper and books sold). Later—between 1565 and 1567—a consistent system of crediting the sales was no longer followed, because more than one person was making the entries, as a differ-

ence in handwriting shows. One bookkeeper continued to use the account *carta et libri venduti*, while another made the mistake of crediting the sales directly to the account *libri in monte*. As the books cease abruptly in 1567, on account of the hasty departure of the Bomberghen, this mistake was never adjusted. In the account, "Books in Stock," an additional column is provided on both the debit and the credit sides for the quantities of books, so that by making a balance, it would have been possible to know at any time how many books were in stock, if the accounts were well kept. (See Appendix IV (e).)

The Virgil in 16° was printed in an edition of 2,500 copies at a cost of £32 s.19 d.5. This makes the price per paper-bound copy $3\frac{1}{3}$ groats or $1\frac{2}{3}$ patards. This book was usually sold to dealers at $3\frac{1}{2}$ patards. To a few large customers, such as two bookdealers in Louvain and two in Paris, Plantin made a price of only 3 patards. When bound in inexpensive leather, each copy of this Virgil sold for one-half patard more; bound in calfskin, it sold for one patard more, that is, at $4\frac{1}{2}$ patards per volume.

The books sold to dealers on credit were recorded by Plantin in some kind of a subsidiary ledger, called *livre des libraires*, in which an account was opened to each dealer. In the Italian ledger, however, no individual accounts appeared, but a general account, entitled *debitori et creditori in monte*, took their place. In theory, the balance of this general account should have agreed with the total of the amounts outstanding according to the *livre des libraires*. This, however, is not quite certain, because some mistakes must have occurred. The bookkeeper made one entry in which he lumped together all the credit sales for a period of several months. In this entry he debited *debitori e creditori in monte* and credited *libri in monte* for the sale of 26,731 books "as appears in the *libro della botega* and for which Christopher Plantin is held responsible." When customers settled their accounts, Plantin's *conto corrente* was debited, and the account *debitori e creditori* was credited. Such entries were likewise made at irregular intervals and each entry included several items. This appears clearly from the description given in the corresponding journal entries. (See Appendix III (f).)

In this brief analysis we have discussed only those accounts which relate to the industrial character of Plantin's bookkeeping. Even in these accounts we have selected one of the simplest examples, that of the Virgil in 16°, which was the first book printed by the partnership. For the other books printed during the life of the partnership, the accounts opened were essentially the same, except that in the case of some large and expensive volumes, items for engravings and wood-blocks, for correctors, etc., were added. When a new work was published, the manuscript was purchased from the author, and no royalties were paid. The purchase price was debited to the account of the particular book being printed.

The articles of association provided for an annual rendering of accounts every October. Whether this was done or not, we do not know, but in the Italian ledger only one "Balance" appears. It is dated April 26, 1565, a year and a half after the formation of the partnership. This "Balance" is given here in a slightly condensed form. The grouping under headings is not found in the original "Balance."

As can be seen at a glance by anyone with a knowledge of accounting, this balance is only a trial balance, and by no means a statement of assets and liabilities. No attempt is made to adjust the account, "Books in Stock" (*libri in monte*), by an inventory at cost, in order to ascertain the profits made since the beginning of the partnership. The account, "Profit and Loss" (*pro e danno*), appears on the debit side with an amount of £14 representing interest on loans. These loans are mentioned on the credit side under the names of Gillis Smidt, Jacob Gerlach, Hans Ort, and George Stecker, from all of whom Plantin borrowed money to supplement the insufficiency of his working capital during the period of rapid expansion.

After this trial balance was made, new accounts were opened by carrying forward the various amounts appearing in it. The

entries in the Italian journal and ledger were continued until February, 1567, when they ceased abruptly. As the two van Bomberghen had to leave the country in a hurry to escape religious persecution, there was probably no time to close the books before their sudden departure. Plantin bought out their shares in the business before they left and settled with his other partners a little later.

advancing him £600 Flemish. Owing to the sack of Antwerp in 1576, known as the "Spanish Fury," Plantin was not able to meet the installment payments agreed upon for the liquidation of this loan. The *grand livre signé C* also contains the account of Philip the Second, King of Spain, for the financing of the *Polyglot Bible*. This account bears the following title, *Sa Majesté Catholique pour compte de la Grande Bible imprimée par son Commandement doibt avoir*, etc.

BALANCE APRIL 26, 1565

Fixed Assets and Equipment:		
Presses		£ 48. 0. 6
Type		290. 3. 8
Books and Mss.		21.12. 4
Fixtures		171. 5. 7
Foundry		122.18. 5
Tangible Assets:		
Raw material (paper)		808. 6. 2
Books in process of printing		410.11. 1
Printed books in stock		936. 0.10
Receivables		116. 7. 1
Charges:		
Profit and Loss (interest on loans)		14. 0. 0
Manufacturing expense		403. 8. 0
Binding Expenses		10. 0. 0
		£3352.13. 8

Capital Account:		
Goropius Becanus		£ 300. 0. 0
Charles van Bomberghen		300. 0. 0
Cornelius van Bomberghen		601. 2. 1
Jacopo de' Schotti		300. 0. 0
Christopher Plantin		278.17.10
		£1779.19.11
Payables:		
Plantin's Account Current		47.12. 1
Sales:		
Books and paper sold		248. 1. 8
Long-Term Loans:		
Gillis Smidt	208.0.0	
Jacob Gerlach	408.0.0	
Hans Ort	253.0.0	
George Stecker	408.0.0	
		1277. 0. 0
		£3352.13. 8

As the property of the van Bomberghen was confiscated on the grounds of heresy, the authorities, who knew of their business relations with Plantin, seized the books of the partnership. Plantin claimed, however, that he did not owe them any more money and that he had broken all relations with heretics. The account books were eventually returned, in 1581. We know this because the receipt signed by Plantin on the occasion of their restoration has been preserved.

After the dissolution of the partnership, Plantin's son-in-law, Jean Moretus, took charge of all the books and kept them in single entry. Separate ledgers were kept for booksellers and for retail customers. Some accounts of special importance were entered in another ledger, of which the *grand livre signé C* is an example.

This ledger contains, among others, the accounts of lenders, such as Goropius Becanus, one of the former partners, who helped Plantin to finance his business by

Besides these ledgers, Jean Moretus also kept a cashbook, which was balanced monthly, and the exactness of the items, both receipts and expenditures, is certified by Plantin's own signature on every page. From time to time Plantin adds a statement above his signature.[13] The *livre des ouvriers*

[13] The following is an example of a statement in the cashbook: "Je, Chrystofle Plantin, congnois et certifie à qui appartiendra que j'ay conféré les comptes des mois précédents, Apvril, May et Juing, touchant l'argent receu et payé par mon gendre, Jehan Mourentorf, et que j'ay trouvé que le tout accorde bien à mon contentement. En signe de quoy j'ay escrit et soussigné cecy de ma propre main et signe manuel, cy mis le cinquiesme jour de Juillet 1588. [Signed] C. Plantin," (I, Christopher Plantin, acknowledge and certify to all concerned that I have examined the accounts of the preceding months, April, May and June, for the money received and paid out by my son-in-law, Jean Moerentorf, and that I have found everything satisfactory. In witness thereof I have written and signed this with my own hand and signature, this 5th day of July, 1588, C. Plantin.) Archives Plantiniennes, no. 14: Livre de caisse, 1576–1589, fol. 144r. For a photographic repro-

and the *livre de ventes à la boutique*, and also a series of journals in which credit sales were recorded daily, were continued under the management of Jean Moretus.

The return to the use of single-entry bookkeeping after the period of the partnership shows that, although double-entry was then known in Antwerp, it was not yet generally practiced. Some people found this system too complicated because they did not understand it. Plantin and Moretus are examples of this group.

The Italian journal and ledger show that in Italy, at least, bookkeeping had reached a very advanced stage by the sixteenth century and that the problems of cost finding were not entirely ignored. This is rather surprising because neither Paciolo nor any of the subsequent Italian writers on bookkeeping refer to industrial bookkeeping in their works. The early treatises on bookkeeping deal only with ordinary mercantile accounting, but the Plantin account books confirm the statement that bookkeeping in actual practice was forging ahead of the textbooks. Just as the technique of double-entry mercantile bookeeping was well developed in Italian practice before any printed treatise appeared on the subject, so industrial accounting developed in practice long before the authors of textbooks paid any attention to it.

duction of this page, see P. G. A. de Waal: *Van Paciolo tot Stevin: Een bijdrage tot de Leer van het Boekhouden in de Nederlanden*, Roermond, 1927, Illustration, no. 20.

APPENDIX I

Press Accounts

(a) Entry in the *journal des affaires* relating to the purchase of the first printing press: Platin Archives, No. 3: *Journal des Affaires*, 1563–67, fol. 1r:

Presse à Imprimer nº 1 débiteur par casse fl. 59 patt. 3½. J'ay faict faire et receu la première presse à imprimer pour laquelle j'ay payé comme s'ensuict:			
Ferreure de la dite presse à Mattheis le serreurier	fl. 30.—		
Bois de la dite à Michel de la Motte	14.—		
Pierre du back de la dite	3.—		
Platine de cuivre pesant 42 lb.[et] ½ à 4½ patt. chaicune livre	9. 4½		
Barreau de la dite presse	—. 5		
Rabattement ou pour avoir dressé et rabotté la platine de cuivre	1.—		
Port et affustage de la dite presse	—.17½		
Marteau 1½ patt. Escardes à laine 3 patt. une lime et un compas	—. 6½		
Sparres 4 à 2 patt. la pièce et pour 2 patt. de clou	—.10		
		fl.	patt.
Somme	59. 3½	59	3½
Casse créditeur par Presse à Imprimer			

(b) Entry in the *journal de C. Plantin* relating to the purchase of the first printing press: Plantin Archives No. 36, *Journal de C. Plantin*, 1561–74, p. 47:

Au nom de Dieu Amen 1563

S'ensuivent les parties de tout ce que j'ay déboursé pour l'achapt des ustensilles de l'imprimerie chacune presse et lectre à part.		
	fl.	patt.
Mattheis le serreurier a receu de compte faict le 18 de septembre 1563 pour l'entière ferreure de la presse Nº 1 la somme de 30 fl.	30	—
Michel de la Motte, menuisier, a receu de compte faict le dit jour pour le bois de ladite presse Nº 1 la somme de 14 fl.	14	—
Pour la pierre de ladite presse	3	—
Pour la platine de cuivre pesante 41 lb. ½ à 4½ patt. la livre	9	4½
Pour le manche du barreau et de la ronse de ladite presse	—	5
Audit Michel de la Motte pour avoir rabotté la platine de ladite presse	1	—
Un marteau 1½ patt. escardes 3 patt. une lime et 1 compas 2 patt.		6½

APPENDIX I (*Continued*)

(c) Entries in the *grand livre des affaires* relating to the purchase of the first four presses: Plantin Archives No. 4, *Grand Livre des Affaires*, 1563–1567, fol. 4ᵛ.

1563 1 octobre	Presse première avec ce qui en despend comme apert au journal et livre des ustensilles ou meubles de l'Imprimerie, feillet 101, couste fl. 59 [patt.] 3½	£ 9.17. 3
20 novembre	Presse seconde avec ce qui en despend au journal et livre des meubles de l'Imprimerie, feillet 101, couste fl. 58 patt. 10 faict en livres de gros	£ 9.15.—
4 décembre	Platines de cuivre 2 pesantes 125 lb. à 4 patt. la lb., fl. 25	£ 4. 3. 4
4 décembre	Chassis de fer 2 extraordinaires coustent 2 fl.	£—. 6. 8
21 décembre	Presse troisiesme à bon compte	£ 6.15. 3
1564 23 janvier	Presse troisiesme à Mattheis Bessels et Michel de la Motte	£ 7.—.—
1 avril	Presse 4 avec ses apartenances	£10. 3.—

APPENDIX II

(a) Entry in the *journal des affaires* relating to the purchase of the paper used in the printing of the Virgil in 16°: Plantin Archives No. 3, *Journal des Affaires*, 1563–1567, fol. 1ʳ.

Au nom de Dieu En Anvers l'an 1563 Papier carré débiteur par casse 143 florins. J'ay achapté d'Alexandre le Clercq 110 rames de papier caré fin à 26 patt. la rame, payé comptant, et pour le port dudit papier à logis de l'imprimerie payé 6 patt. Somme 146 fl. 6 patt. Casse créditeur à Papier caré 110 rames	fl. 143. 6.—
(b) Similar entry in the *grand livre des affaires:* Plantin Archives No. 4, *Grand Livre des Affaires*, 1563–1567, fol. 1ᵛ. Caré fin de Troye, 110 rames, d'Alexandre le Clercq à 26 patt. la rame et 6 patt. de port pour lesdits 110 rames, font livres de gros	£21.17. 8

APPENDIX III

Excerpts from the Italian Journal, Plantin Archives, No. 2, Giornale della Stampa, 1563–67:

(a) Entries relating to the first four presses:

. 6 .— . 1	Per Presses // A Christofaro Plantino £30 s.17 d.6. Sonno per 2 presse fornite platines de cuivre, chassis de fer, e a bon conto de la terza pressa £6 s.15 d.3. Somma in tutto como de sopra. Como anche per il suo libro appare..........	£30	s. 17	d. 6
. 6 — . 1	Per Presses // A Christofaro Plantino £7.—.—. Sonno per il compimento de la terza pressa como appare per il suo libro fo a dí 23 genaio	£ 7	s. —	d. —
. 6 — . 1	Per Presses // A Christofaro ditto £10 s.3 —. Sonno per la quarta pressa tutta fornita..........	£10	s. 3	d. —
	(b) Entry relating to paper used in Virgil in 16°:			
. 4 — . 1	Per Carta quadra fina de Troye // A Christofaro Plantino £23 s.17 d.8. Sonno per risme 110 che lui li ha pagato a Alexandro le Clercq..........	£23	s. 17	d. 8
	(c) Entries relating to Manufacturing Expenses (*Spese di mercanzie*): A dí 24 decembrio 1563			
.6 — .1	Per spese de marchantia // A Christofaro Plantino £37 s.1 d.1. Sonno per diverse spese fatte per esso Platino como per il suo libro...	£37	s. 1	d.1
.6 — .3	Per spexe de marchantia // A Cornelio de Bombergo £1 s.8 d.-. Sonno per libri de li conti de la campagnia de la stampa che 'l ditto Bombergo ha sborsato..........	£ 1	s. 8	d.-
	A dí 19 fevraio 1564			
.6 — .1	Per spexa de marchantia // Al ditto Plantino, £36.11.4. Sonno per diverse spexe datte de a dí ultimo decembrio fina a dí 19 fevraio como per il suo libro appare..........	£36	s.11	d.4
	(d) Entries relating to Virgil in 16°:			
.7 — .4	Per Virgilio 16° // A Charta quadra fina £21.17.8. Sonno per risme 101 comprate da Alexandro le Clercq e messe in opera fina a dí primo genaio e fanno peze 2500. Fo a dí 19 fevraio..........	£21	s.17	d.8
.7 — .6	Per Virgilio // A spesa de marchantia £8.19.8 compreso ogni spesa como per il libro del Plantino appare..........	£ 8	s.19	d.8
.7 — .16	Per Virgilio 16° // A Carta Carré £2.2.1 sono per risme 101 andati a stampar ditto Virgilio erano missi a s.3 d.11 le quali mettiamo adesso a s.4 d.4 fanno..........	£ 2	s.2	d.1

APPENDIX III (*Continued*)

		£	s.	d.
	(e) Entry relating to Books in Stock:			
.44 — .7	Per Libri in Monte // A Virgilio in 16° £32.19.5 sono per n° 2500 che saldiamo il Virgilio in ditti libri in monte.	£32	s. 9	d.5
	(f) Entries relating to *debitori e creditori in monte:* Laus deo 1565 a dí 4 Luyo in Anvers			
..64 — ..70	Per Libri venduti a diversi // A debitori a Creditori in Monte £3.13.4 sono che Christofaro Plantino ne fece bono recevuto da loro.	£ 13	s.13	d.4
..70 — ..62	Per debitori detti // A Libri in Monte nostri £694.18.–. Sono per peze 26, 731 venduti a diversi in più volte fina a dí 25 di junio anno 65, come sopra il libro della botega appare. Delli quali en havrà da render conto Christofano Plantino. Montano fl.4169 patt. 8½. Fano.	£694	s.18	d.-
..74 — ..70	Per Christofaro ditto // A Debitori e creditori in Monte £151.11.5 recevuto diversi de a dí 13 d'augosto fina questa. Furno in diverse partite come sopra suo libro sta specificato.	£151	s.11	d.5

APPENDIX IV

Excerpts from the Ledger, Plantin Archives, No. 1, Libro della Stampa, 1563–67.

(*a*) Press Account

1563 Presse dieno dar a dì 24 decembrio A Christofaro Plantino £30 s.17 d.6. Sonno per 2 presse, plantines de cuivre, chassis de fer, e £6 s.15 d.3 pagato a bon conto de la terza pressa.	k. 1	£30	s.17	d.6	Presse d'inchontra dieno avere per si medemo a dì 26 Aprilo £48.—.6 che passò per il bilanzo	k.45	k.48	£48	s.—	d.6
A dì 19 fevraro A Christofaro ditto £7.—.—. per il compimento de la terza pressa como per il suo libro fo dì 23 genaro.	k. 1	£ 7	s.—	d.—						
1564 A dì 8 d'aprile A Christofaro ditto £10.3.—. Sonno per la quarta pressa tutta fornita.	k. 1	£10	s. 3	d.—						

(b) Paper Account (*Carta quadra fina de Troye*), entries relating to the paper used for the printing of the Virgil in 16°:

1563 Carta quadra fina de Troye die dare a dì 24 decembrio A Christofaro Plantino £23 s.17 d.8. Sonno per risme 110 como per il suo libro. . . . . [etc., etc.]	R° 110	K. 1	£23	s.17	d.8	Charta quadra fina de Troye die aver a dì 19 fevraro per Virgilio in decimo sexto. Sonno per risme 101 comprate da Alexandro le Clercq a s.3 d.11 la risma. [etc., etc.]	R° 101	K. 7	£21	s.17	d.8

Note: R° = *Risme*, Eng. reams. The column with K. or k. indicates the page of the ledger where the corresponding entry is found

(c) Manufacturing Expense Account (*Spese di Mercanzie*):

1563 Spesa [*sic*] de marchantia die dar a dì 24 decembrio A Christofaro Plantino £37. s.1 d.1. Sonno per diverse spese fatte per esso Plantino.	k. 1	£37	s. 1	d. 1	1563 Spexa de marchantia die aver a dì fevraro per Virgilio in 16° £8.19.8 compreso tutte le spexe a stamparlo.	k. 7	£ 8	s.19	d.8
A dì ditto A Cornelio de Bombergo £1 s.8 d.—Sonno che 'l ditto Bombergo li ha sborsato per libri de conti de la compagnia de la stampa.	k. 3	£ 1	s. 8	d.—	A dì ditto per Horatio in 16° £3.10.9 compreso tutte le spexe a tamparlo. . . .	k. 7	£ 3	s.10	d.9
A dì 19 fevraro A Christofaro ditto £36.11.4 per diverse spese fatte de a dì ultimo decembrio fina a dì 19 fevraro como per il suo libro appare.	k. 1	£36	s.11	d. 4	A dì 10 d'aprile per Luchanus in 16° £3.13.—compreso tutte le spexe.	k. 9	£ 3	s.13	d.—
A dì 8 d'aprile A Christofaro ditto £7.11.6. Sonno per piú spexe fatte de a dì 11 marzo fina prima d'aprile per esser stato a Bruxelles e Lovanio e aver impetrato certi privilegij.	k. 1	£ 7	s.11	d. 6	A dì ditto per Responsione di Venerabili Sacerdoti inglesi in 8° £7.2.6 compreso tutto.	k. 9	£ 7	s. 2	d.6
A dì ditto A Christofaro ditto £54.–.3. Sonno per diverse spexe fatte nel stampar li libri.	k. 1	£54	s.—	d. 3	A dì ditto per Civilità puerile in 8° £1.4.— compreso tutte le spexe.	k. 9	£ 1	s. 4	d.—
A dì 19 magio A Christofaro ditto £47.8.– Sonno per diverse spexe fatte nel stampar li libri.	k. 1	£47	s. 8	d.—	A dì ditto per Magia naturale in 16° £2.15.—compreso tutte le spexe.	k.10	£ 2	s.15	d.—
A dì 27 junio A Christofaro ditto £54.3.10. Sonno per piú spexe fatte como per il suo libro appare.	k.12	£54	s. 3	d.10	[Etc., etc., numerous other entries]				
Somma £238.4.—					Somma £238.4.—				

APPENDIX IV (*Continued*)

(d) Goods in Process Account (Virgil in 16°)

Virgilio in decimo 6° die dar a dì 19 de fevraro A Charta quadra £21.17.8. Sonno per risme 101 comprate da Alexandre le Clercq fanno.............	P. 2500	k. 4	£21	s.17	d.8	Virgilio d'inchontra die aver per Libri in Monte a dì 26 aprile £32.19.5. Sono per peze 2500 che saldiamo qui et rapportiamo in ditta Libri in Monte..........	P. 2500	k.44	£32	s.19	d.5
A dì ditto A Speza de marchantia £8.19.8 compreso ogni speza como per il libro del Plantino appare....................		k. 6	£ 8	s.19	d.8						
A dì ditto A Carte carré £2.2.1. Sono per risme 101 sopraditte a le quale habiamo ionto d.5 per risma como in jornal appare...		k.16	£ 2	s. 2	d.1						
£32.19.5											

(e) Finished Goods Account (*Libri in Monte*):

1565 Libri in Monte dieno dare a dì 26 aprile A Virgilio 16° £32.-19.5. Sono che saldiamo qui i ditto Virgilio per..............	P. 2500	k.7	£32	s.19	d.5	1565 Libri in Monte d'inchontra deino avere a dì aprile per si medemo che passò per il bilanzo k.45 a uno altro suo conto..........		k.62	£936	s.—	d.10
A dì ditto A Horatio 16° Sono che dicho £9.12.1 che saldo qui per..............	1250	k.7	£ 9	s.12	d.1						
A dì ditto A Lucano 16° £10.-.7 che saldo qui per......	1250	k.9	£10	s.—	d.7						
[etc., etc.] Somma pese 74,950 £936.—.10						Somme peze 74,950 £936.—.10					

Note: P. = *Pezze*, Eng. pieces, i.e. copies.

LIMITATIONS ON STOCK DIVIDENDS

Harry D. Kerrigan

Since stock dividends do not distribute corporate assets or affect the safety of creditors, legal restrictions on their declaration may be deemed less necessary than in the case of cash dividends. Yet, a closer study discloses a real need for imposing limitations on stock dividends. Restrictions on stock dividends must of course be expected to be different from those applied against cash dividends, because of the different problems raised by the two types. Stock dividends involve the issuance of new shares, calling for the increase of capital stock[1] and reduction of the surplus or profits from which they are declared. Stock dividends also result in a form of recapitalization. Where there is more than one class of stock outstanding, the realignment of net worth accounts may affect the participation rights of a particular class of stockholders in assets, in earnings, and in management.[2] Finally, stock dividends may mislead prospective investors and purchasers of shares, in view of the impressions which such dividends may create as to the earning power of the issuer.[3]

It is the purpose of the present paper to summarize the more important limitations on stock dividends under the existing American law as found in the statutes and decisions; and to raise questions, where the occasion appears, concerning the efficacy of these systems of control from the standpoint of the public interest. The discussion is presented under the following heads:

Right to Declare
Necessity of Profits or Surplus
Amount of Capitalization
Stock Dividends by Corporations with Two or More Classes of Issued Stock

RIGHT TO DECLARE

Authority to declare stock dividends rests upon the general power of a corporation to increase the amount of its capital stock by the issuance of new shares.[4] This power exists by virtue of enabling provisions in the corporate charter or in the statute of the state of incorporation.[5] The right to declare stock

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[1] This study adopts the use of the term "capital stock" instead of either of the less familiar terms "legal capital" or "stated capital." The latter terms are however gaining in usage. As used in the present study, "capital stock" has the same meaning as legal or stated capital. Capital stock is an amount which is, generally speaking, the aggregate par value of issued shares having par value and the aggregate stated value of issued shares without par value. The amount remains the same until changed by appropriate corporate action. A more detailed statement of how the amount of capital stock is determined is as follows:

(1) The aggregate par value of all issued shares having par value, except such part thereof as may represent discount in the few states that permit the issuance of par value shares for a consideration less than par;* plus

(2) the aggregate amount of consideration received for all issued shares without par value, except such part thereof as may have been allocated to paid-in surplus; plus

(3) such amounts as may have been transferred from surplus to stated capital, independently of a stock dividend, by voluntary action of the board of directors —usually in the case of a corporation having shares without par value;† less

(4) the aggregate amount of any reductions of stated capital previously made in accordance with permissive statutes.

[2] The rights listed may affect the position of an individual stockholder even in the case of a company with only one class of stock. This is especially true where a company follows a more or less continuous policy of paying dividends in own stock. Here the receipt of fractional shares as dividend stock, for example, may prevent a prorata increase in the rights stated. For a detailed discussion of the problem see (1931) 44 *Harvard Law Rev.* 404.

* See California Civ. Code (Deering, 1931 and Supp. 1933) sec. 300 b; and R.I. Gen. Laws (1923), ch. 248, as amended, R.I. Laws 1932, ch. 1941, sec. 53.

† See *infra*, note 6.

[3] The danger of deception and misrepresentation arises from a number of sources. It arises in part from the laxity of legal restrictions on the payment of stock dividends as compared to those governing cash dividends, in spite of the fact that, rightly or wrongly, to lay investors generally a "dividend is a dividend." It arises in part from the advent of no-par or low par stock, together with such devices of corporate practice as stock split-ups or stock rights all of which offer opportunities of deception when used in conjunction with apparent stock dividends.

[4] Three general methods, of which a stock dividend is one, are available for the issuance of new shares. These are: (a) by means of subscriptions receivable in cash; (b) by means of subscriptions receivable in property or services; and (c) by means of stock dividends. See 11 Fletcher, Cyc. Corp., Perm. Ed. (1932), 284; 1 Cook, Corporations, 8th Ed. (1923), 128.

[5] "A corporation has no implied power to increase its

dividends is thus fundamentally based on the right to issue new shares.[6] From this follows the general rule that where a corporation has power to increase its capital stock, it may do so by making a stock dividend.[7] The reason underlying this legal sanction appears to be that the stock dividend is paid in lieu of dividends in cash or other property.[8] Viewed thus, it is immaterial whether capital stock is increased by issue of stock dividends in lieu of property dividends, thereby retaining such property in the corporation, or by paying stockholders dividends in property and then selling additional shares in the market to raise funds for corporate purposes. In other words, dividend stock may be issued by a corporation which desires to retain corporate assets which would otherwise be distributed as dividends, the consideration for the issue of the new shares being assets thus retained, instead of the fresh receipts from the sale of shares. The underlying reason may be put more directly as follows: Capital stock may be increased by the method of stock dividends, the *quid pro quo* for which the corporation already possesses in the way of reinvested property otherwise distributable as dividends.

Two broad types of limitations exist on the power of a corporation to declare stock dividends. The first relates to the law of the issuance of shares. Besides certain procedural formalities which must be observed.[9] the requisite here is availability of shares which can be lawfully issued. Such shares consist of authorized shares previously unissued or newly authorized shares.[10] These

capital stock, and cannot do so except when the authority and power has been expressly conferred by statute, or expressly reserved with legislative sanction, as in the charter." 11 Fletcher, *op. cit.*, 197. See also Ballantine, Corporations (1927), 417; (1919) 14 C. J. 391; and 4 Thompson, Corporations, 2nd Ed. (1909), 111. This is a settled principle in the law of corporations. However, the grant of power being a legislative one, it must not violate any constitutional provisions prohibiting or regulating the increase in capital stock. See 11 Fletcher, *op. cit.*, 197.

[6] This statement may seem to overstress stock dividends as a method of issuing new shares, to the neglect of the other equally important aspect, the capitalization of surplus or profits. But the capitalization of surplus or profits does not necessarily carry with it the issuance of new shares.

In the following jurisdictions, the resolutions of the directors may direct the transfer of surplus or profits to stated capital without the issue of dividend stock: California, Sec. 300 b, 348 c; Delaware, Sec. 14, Laws of 1929, p. 374; Illinois, Sec. 19; Pennsylvania, Sec. 614; Michigan, Sec. 20; Minnesota, Sec. 1, X, Sec. 20, VII; Nevada, Sec. 1623; New Jersey, Sec. 119e; Ohio, Sec. 37. (The compilations in which these laws are found are given in Appendix A).

On the other hand, the payment of stock dividends always involves the issue of new shares.

[7] "As a general rule, a corporation is authorized to issue stock dividends when it has reserve stock or can lawfully issue new stock with which to make the dividend." 11 Fletcher, *op. cit.*, 899; See also Ballantine *op. cit.*, 516; 4 Thompson, *op. cit.*, 206; 2 Cook, *op. cit.*, 1351.

[8] See Ballantine, *op. cit.* 516; 11 Fletcher, *op. cit.*, Sec. 5359; 4 Thompson, *op. cit.*, 206. The leading case on this point is Williams vs. Western Union Tel. Co. 93 N.Y. 162 (1883); where the court said at p. 190—"If it [the corporation] can issue stock in payment of proprerty to be obtained by it as part of its capital for its legitimate uses, why may it not issue stock in payment for property in effect purchased by them [the stockholders] and added to its permanent capital and which they relinquish to have divided?" See also Howell vs. Chicago & North Western Railroad Co., 51 Barb. (N.Y.) 378 (1868); Union and New Haven Trust Co. vs. Taintor, 85 Conn. 452 83 Atl. 697 (1912); U. S. vs. Siegel, 52 Fed (2d) 63 (1931).

[9] These provisions are generally statutory requirements.

[10] Shares once issued but later reacquired and held as "treasury shares" instead of retired, may, of course, be distributed again in payment of a dividend declared, but such a dividend does not constitute a stock dividend. Capital stock was not diminished when the shares were reacquired; capital stock is not increased when the shares are distributed once more. On the other hand, a corporate asset was decreased when the treasury shares were bought, while profits or surplus was reduced when the treasury shares were distributed. Taking the transactions of acquisition and subsequent disposition of treasury shares together the financial effects are seen to be the same as in the case of cash dividends. See 11 Fletcher, *op. cit.*, Sec. 53,555. See Leland vs. Hayden, 102 Mass. 542 (1869); Green vs. Bissell, 79 Conn. 547 (1907).

The foregoing reasoning is admittedly based on a legalistic view of capital stock, namely, that capital stock cannot be reduced without cancellation of the shares in the manner prescribed by law. Accordingly, reacquired stock may be carried as an investment until sold or formally retired. But many accountants contend that a corporation cannot properly treat reacquired stock as an asset for a positive solution of the problem, however, their opinions differ. Some contend that the effect of reacquiring own stock is temporarily to reduce earned surplus. If the shares are reissued on the occasion of a dividend distribution, the reduction of earned surplus is made permanent. Under this proposal also dividends paid in treasury stock do not constitute a "stock dividend"; and for the reasons already stated above. Another contention is that when a corporation reacquires its own stock the result is to restore the shares involved to the status of authorized but unissued stock, thereby reducing capital stock (and paid-in surplus) to the extent of the reacquired shares. An effect of this restoration is that the shares, on reissue, are treated

shares may be common or preferred,[11] and with or without par value.[12] The second limitation relates to the capitalization of surplus or profits from which the stock dividend is declared. Under this head are involved such matters as the kind of surplus or profits which is to be capitalized, and the amount thereof. These problems are considered in a separate section below.

The right to declare stock dividends is firmly established by the courts on the ground already stated. Express authorization by statute, however, is coming to be more and more the case.[13] Accompanying this trend is another making stock dividends subject to specific statutory regulation.[14] In some jurisdictions, statutory or constitutional provisions operate as a complete bar to the declaration of stock dividends. Thus, in Massachusetts, trust companies and public utilities are prohibited from declaring such dividends.[15] In other states, consent of the public-service commissions and strict compliance with the regulations are conditions of the issuance of stock dividends by public utilities.[16] National banks were prohibited from declaring stock dividends until the law was amended in 1927 to remove the bar, though compliance with certain conditions specified in the statute is still necessary before such dividends may be declared.[17]

Aside from the question of the right to declare, the present policy of the law is to allow the directors of a corporation full discretion as to when it is opportune to declare stock dividends, as in the case of money dividends.[18] The general power of a corporation's directors to distribute or withhold earnings is a settled principle in corporation law. A court may, however, at the suit of an interested party, investigate the reasonableness with which this power is exercised by the directors of a corporation. While the leading case on this point dealt only with cash dividends,[19] the question of reasonableness of directors' actions would seem to apply to stock dividends also.[20] The wisdom of treating both kinds of dividends alike on this point is, however, doubtful since they serve different purposes.[21] It is suggested that corporation laws should require that directors' resolutions declaring stock dividends be subject to the consent of shareholders entitled to vote and shareholders adversely affected as a result of the stock dividend.[22]

THE NECESSITY OF PROFITS OR SURPLUS

The existence of ample profits or surplus from which to declare stock dividends is a requisite that is well established in all jurisdictions.[23] In applying this principle, how-

in the same manner as previously unissued stock. Under this view, dividends paid with such shares would of course properly constitute "stock dividends." For a detailed discussion of treasury stock see the recent work of R. P. Marple, "Capital Surplus and Corporate Net Worth" (1936), pp. 53–76.

[11] See Soehnlein vs. Soehnlein, 146 Wis. 330, 131 N.W. 739 (1911); Howell vs. Chicago North Western Railroad Co., 51 Barb. (N.Y.) 378 (1868); Beaman vs. Gerrick, 235 Mass. 79, 126 N.E. 352 (1920).

[12] A number of recent statutes expressly permit the issue of no-par-value shares as stock dividends. See statutes of Indiana, New York, Ohio, Wisconsin. Michigan, California, and Illinois.

[13] The laws of seventeen states now expressly authorize the declaration of dividends payable in own shares. These states are Alabama, California, Idaho, Illinois, Indiana, Louisiana, Maryland, Michigan, Minnesota, New Hampshire, New Jersey, Ohio, Pennsylvania, Tennessee, Washington, West Virginia, Wisconsin.

[14] These regulations will be referred to later as they fall under the particular point discussed.

[15] Ann. Laws Mass., 5 Michie (1932) 221 (Railroads), 309 (Street Railways) 363 (Gas or electric Companies). See Smith vs. Cotting, 231 Mass. 42, 120 N.E. 177 (1918). Circumventing the Massachusetts law has been practically accomplished by declaring cash dividends and simultaneously issuing new shares at par value per share, and giving the shareholder the option to take either the cash or the stock. See Jones vs. Brown, 171 Mass. 318 (1898).

[16] 11 Fletcher, *op. cit.*, 902–903.

[17] 12 U.S.C.A. 57, as amended by Act of February 25, 1927, Ch. 191, Sec. 5 (44 Statutes 1227).

[18] Schell vs. Alston Mfg. Co., 149 Fed. 39 (1906). Williams vs. Western Union Tel. Co., 93 N.Y. 162 (1883); Howell vs. Chicago & North Western Railroad Co., 51 Barb 378 (1868); Sexton vs. C. L. Percival Co., 189 Iowa 586, 177 N. W. 83 (1920).

[19] See e.g., Dodge vs. Ford Motor Co., 204 Mich. 459, 170, N.W. 668 (1919).

[20] 1 Morawetz, Corporations, (1886) 2nd Ed. 426.

[21] See *supra*, p. 480.

[22] The desirability of the requirement suggested will be more apparent from the discussion following. In the case of small, recurrent stock dividends, usually declared from earnings of the current year, the stockholders by their vote could authorize the policy of making such dividends for a stated length of time. This would remove the necessity of approving separately each of the directors' resolutions declaring such dividends.

[23] A stock dividend is the conversion of surplus or undivided profits into capital stock, which is dis-

ever, jurisdictions employ a variety of terms to explain what constitutes profits or surplus. Some of the variations are due merely to differences in phraseology used; others reflect differences in the concept of profits or surplus used for the purpose. This is not surprising. Profits and surplus arise from a variety of sources; they are terms with multifarious meanings.[24] It is well, therefore, to start this discussion by explaining the terms and their meanings as used herein. Corporate surplus may be classified according to its principal sources as follows:[25]

(1) Net profits or earned surplus
(2) Paid-in or contributed surplus
(3) Unrealized appreciation surplus

In (1) the term "profits" is used as a synonym for "earnings," so that net profits and earned surplus represent current net earnings and accumulated past net earnings.[26] Sound accounting principles, accepted generally by the courts, are available for guidance in the determination of these amounts in specific instances.[27] In (2) reference is to that portion of the consideration received from shareholders which for some reason is deemed not to comprise part of capital stock. The ways in which paid-in surplus arises may be summarized as follows: (a) issuance of par value shares for an amount of consideration in excess of par value;[28] (b) issuance of no-par shares for an amount of consideration in excess of stated value;[29] (c) assessments against shareholders; and (d) authorized reduction in capital stock.[30] in (3) surplus is created through an

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tributed to shareholders in lieu of cash dividends. U. S. vs. Seigel, 52 Fed. (2d) 63 (1931); see Equitable Trust Co. vs. Prentice, 250 N. Y. 1, 164 N.E. 723 (1928).

The conversion of surplus assets into strict capital is one of the distinguishing characteristics of a stock dividend. Harding vs. Staples, 111 Conn. 325, 149 Atl. 846 (1930).

"The basis of the issue [of stock dividends] . . . in so far as payment into the corporation is not required by the recipient, is surplus assets which thus become converted into strict capital . . . " Green vs. Bissell, 79 Conn. 547, 551, 65 Atl. 1056, 1057 (1907).

"A declaration of a so-called stock dividend . . . 'carries' the portion of surplus covered by such stock dividend into the permanent capital account . . ." Lamb vs. Lehman, 110 Ohio 59, 79, 143, N.E. 276, 282 (1924).

The important feature of a stock dividend is the increase in the fixed capital of a corporation due to the capitalization of earnings. Hayes vs. St. Louis Union Trust Co., 317 Mo. 1028, 298 S.W. 91, (1927).

Stock dividends are legal where a corresponding amount of profits are permanently added to the capital stock. Soehnlein vs. Soehnlein, 146 Wis. 330, 131 N.W. 739 (1911).

A stock dividend is properly payable only out of surplus. Whetsel vs. Forgey, 323 Mo. 681, 20 S.W. (2d) 523, (1929).

[24] See (1911) 20 Ann Cas. 683, for an exhaustive note on numerous case definitions of the term.

[25] All-inclusive definitions for these concepts are to be avoided. It is best to leave their interpretation open. But lack of standardized terminology does not also mean absence of general recognition of terms used. Hence, while comprehensive definitions for profits and surplus are lacking, a classification of surplus according to its sources has come to have an established meaning. This is evident, so far as the law is concerned, in case opinions, and a backward glance over the years shows that these expressions of recognition are increasing. See Berle, A. A., Jr. and Fisher, F. S., Jr. Elements of the Law of Business Accounting. (1932) 32 Col. Law Rev. 573.

[26] Current net earnings or accumulated past net earnings are usually interpreted by its courts as not being confined to earned surplus resulting from the ordinary profits of the business, but as including any kind of *realized* gain. Accordingly forfeiture of consideration received on partly paid capital stock subscription, profit on sale of plant, profit on trading in treasury shares, donations, gifts, etc., are realized gains though they do not arise out of operations, strictly speaking.

[27] A. A. Berle, Jr., and F. S. Fisher, Jr., *op. cit.*, 573.

[28] In the case where additional issue of stock has been made after a corporation has been in business for some time, and has accumulated earned surplus, the premium paid may be simply a method of equilizing the position of old and new shareholders. The premium, in this case, to the extent that it represents an equalization of the prorata interest in accumulated surplus, is sometimes considered by the courts as an addition to earned surplus. It is realized, however, that this is not the general practice. See Equitable Life Assurance Soc. vs. Union Pac. Railroad Co. 212 N.Y. 360, 160 N.E. 92. (1914), and Smith vs. Cotting, 231 Mass. 42, 120 N.E 177 (1918).

[29] Existing corporation laws are of three general groups in their treatment of the consideration received for issue of shares without par value. The first group treats the whole consideration as an addition to capital stock. The second group permits the company's directors to designate the portions to be allocated to capital stock and paid-in surplus. The third group requires the capitalization of a substantial portion of the consideration received in the case of common shares; in the case of preferred shares, the amount required to be capitalized is usually the amount to which the shares are entitled upon liquidation or redemption. See Geo. S. Hills, Model Corporation Act (1935), 48 *Harvard Law Review*, 1361.

[30] Recapitalizations, reorganizations and mergers sometimes create situations in which it is not clear whether the "excess of assets" paid in over amount of capitalization should be credited to paid-in surplus.

First, assume the case in which earned surplus is converted into paid-in surplus through a change in

upward revaluation of assets. The appreciation in value is termed "unrealized" because the assets are increased by mere revaluation.[31] This amounts to repricing of property by its owner, in place of carrying the property at the price which entered into the legal consideration paid upon acquisition.[32]

Most statutes, where they cover the point at all, require the existence of an adequate surplus without distinction as to the kind of surplus intended to be used for stock dividends, or the kinds, if any, not intended to be available. As a result, the courts have applied the general law to specific cases, the opinions rendered representing the law on the kind of surplus available for stock dividends. It thus appears that where the statutes have codified the common-law principle of requiring ample surplus as the basis for stock dividend declaration, they have, as a rule, left to the common law the task of distinguishing the kinds of surplus out of which share dividends may be declared.

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legal entity. Thus, an Illinois corporation with earned surplus may transfer its business to, say, a New Jersey corporation in order to change its corporate domicile. In this case, if the basis of booking the assets transferred is not changed, and the issued capital stock of the new company is the same both as to class and amount as those of the old company, it would seem appropriate to continue the earned surplus of the old company on the books of the new company. Reorganizations are seldom this simple, however. Usually, recapitalizations upward or downward occur, accompanied with (1) corresponding a mark-up or mark-down of fixed assets, or (2) no change is made in the booking basis of assets, in which case there is greater or less surplus left in comparison to that shown by the books of the old company, according as the capitalization decreased or increased. It is believed that in these cases the difference between the par or stated value of the capital stock issued by the new company and the book value of the assets acquired, where the difference is an excess of assets, should be set up as paid-in surplus. Reason: except in the relatively rare case of a change in legal entity only, as described above, a new company cannot start with any surplus other than paid-in surplus. See American Institute of Accountants, *Accounting Terminology* (1931) 119.

Second, assume that corporation A is merged with corporation B. In this case, the earned surplus, if any, of the absorbing corporation remains unaffected. The earned surplus of the absorbed corporation is, however, eliminated. This earned surplus cannot be transferred, since the entire net worth of the absorbed company after the merger is represented by the capital stock of the continuing corporation. Some states expressly permit the continuation of earned surplus on the transferee's books under the circumstances stated. Thus, the Wisconsin statute provides that if shares without par value are issued "in exchange for the shares of an existing business then having a surplus, such surplus may be retained as a surplus available for the payment of dividends . . ." (Wis. Stat. (1935) Sec. 182. 14 (1). It is to be noted, however, that the statute does not expressly sanction the representation of the surplus in question as "earned surplus," but merely that such surplus is available for dividends.

Third, assume that there is no change in legal entity, but that a corporation reduces its capitalization, the effect of which is to segregate earned surplus previously capitalized. Is earned surplus restored, or is the segregated amount a form of paid-in surplus? Under the principle that any consideration received for capital stock once issued is a form of paid-in capital, the answer is that the credit arising constitutes paid-in surplus.

[31] Appreciation, in so far as it reflects the excess of appraised sound value over depreciated book value, is due to three major factors:

1. Errors in accounting for plants values—
   - (a) Books do not show full cost of the properties (capital expenditures charged against revenue)
   - (b) Books show an excessive amount of accrued depreciation.
2. Unrealized increment—
   - (a) Increase in market value of land resulting from social and industrial forces.
   - (b) Increase in market value of plant and equipment from increased demand for the products which they help produce. Reproducible items of the class here covered appreciate in value only for a limited length of time, for the supply of these items will probably be adjusted to the increased demand in time.
3. Rise in general price level, as measured by a representative price index.

(1) If the factors grouped under "accounting errors" could be segregated, the amounts involved would be appropriate credits to earned surplus. The seggregation is, however, rarely practicable. (2) Strictly speaking, unrealized increment should be measured in a way as to allow for the increased market value due merely to a decline in the purchasing power of the dollar. In other words, the increase in money value should be subject to a price-index corrective. Thus adjusted, the increment would represent true unrealized asset appreciation, i.e., a use in the relative value of the asset in question in terms of other property. (3) Increased money value may result from a rising price level; this kind of increase is due to the decline in the purchasing power of the unit of money.

In practice, the measurement of each of the foregoing major elements is considered too difficult. As a result, the entire excess of appraised sound value over book value is treated as unrealized appreciation surplus.

Accountants are divided over the question of recording appreciation, as determined above, in the books. For arguments that recording is desirable, see Wildman, J. R. (1930), 5 Accounting Rev. 34; Kester, R. B., *Accounting Theory and Practice*, II (1933) 104 (practice defended if occasioned by financing through sale of bonds). For arguments against the practice see, Littleton, A. C., *Value or Cost* (1935), 10 Accounting Rev. 269; Daniels, M. B., The Valuation of Fixed Assets (1933), 8 Accounting Rev. 302; A Tentative Statement of Accounting Principles Affecting Corporate Reports (1936), 11 Accounting Rev. 188.

[32] *I.e.*, at cost except for depreciation and similar factors allowed for.

Net Profits or Earned Surplus

The availability of net profits or earned surplus as a source of stock dividends is unquestioned in all jurisdictions. This is because net profits or earned surplus is the basis par excellence for the payment of stock dividends, as it indeed is also for other forms of dividends. Shareholders and share purchasers ordinarily expect dividends that represent profits of the business. The funds invested, while available for the absorption of losses, are expected to be otherwise reserved until time of liquidation or redemption. The shareholder is concerned over this distinction between original investment and profits thereon even though the "distribution" consists of additional shares instead of cash. Net profits or earned surplus qualify as a dividend basis because they meet both the two major tests which in American law prove whether or not a dividend is legally made. These are the "net-assets" test and the "net-profits" test.[33] The former is concerned with the balance sheet and the values stated therein; the latter is concerned with present or past profits statements.[34]

Paid-in Surplus

Paid-in surplus is considered a proper legal source from which to declare stock dividends in the absence of statutory[35] or charter prohibition. This is because stock dividends declared from paid-in surplus meet the "net-assets" test of legality discussed above. Long in existence as a common law principle,[36] this general test has in recent years been written into practically all of the state corporation laws.[37] The statutes of four states[38]

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[33] For collection of cases and detailed discussion see Weiner, J. L., "Theory of Anglo-American Dividend Law (1929), 29 *Col. Law Rev.* 461.

[34] (a) "Net-Assets" test—This test is variously worded in both the decision and statutes, The more common designations are—

(1) Solvency—
No dividend may be paid while the corporation is insolvent, or which will render it insolvent. This may mean that (a) assets must not aggregate less than debts to creditors, or that (b) debts cannot be paid as they fall due. It is frequently not clear in dividend statutes which of these two meanings is intended. See Rett, F. M., When is a Corporation Insolvent? (1932) 30 *Mich. Law Rev.* 1040.

(2) Capital Impairment—
No dividend may be paid which will impair the stated capital of the corporation. (Assets must not total less than the sum of the debts and capital stock).

(3) Surplus—
No dividends may be paid except out of surplus. (Assets must aggregate more than the sum of debts and capital stock).

Since use is made of the asset total to find whether or not an "excess of assets" exists, the reliance of this test upon asset valuations is apparent. Both unrealized-appreciation surplus and paid-in surplus are logically available for dividends under this standard.

It is not uncommon to find more than one of the foregoing tests in a given statute, in which case each one is generally interpreted as an "alternative."

(b) "Net-Profits" test—The restriction here is that no dividend may be paid except from net profits or earned surplus.

Insofar as a given statute contains both a "net-assets" test and a "net-profits" test, the explanation is probably to be found in a failure to distinguish between the two. That the two tests are not "equivalent" restrictions is seen in the availability for dividends of paid-in surplus and unrealized-appreciation surplus under only the "net-assets" standard, Attention is called, however, to the following illuminating conclusion of the author of an elaborate recent study of asset valuations to determine profits or surplus available for dividends: "The majority of the recent acts . . . *purport* to apply the capital-impairment test rather than the profits test . . . [the legality of a dividend] is made to depend, *in form*, on . . . whether or not the payment would leave the capital unimpaired. . . . But while . . . [this is] the formal procedure . . . the statutory standards of asset valuation are such as, in effect, to convert this test into an accumulated profits test [exception: paid-in surplus]. . . . Fixed assets are to be 'valued' at actual cost minus . . . [accrued] depreciation. . . ." Bonbright, J. C., *The Valuation of Property* (1937), II, 971. This generalization as to asset valuation does not apply to stock dividends, however, as will be seen below.

[35] A statute prohibiting the making of dividends except from "surplus profits" apparently does not preclude the declaration of stock dividends from other kinds of surplus. See 11 Fletcher, op. cit. 902; and (1928) 55 A.L.R. 70, both of which cite Williams vs. Western Union Telegraph Co. 93 N.Y. 162 (1883). The prohibition must be stated more expressly. Accordingly, the statutes of New Hampshire, Kansas, and Georgia, do not operate to prevent stock dividends, although all of them declare that dividends are payable only out of "surplus profits."

[36] For an early statement see Williams vs. Western Union Tel. Co. 93 N.Y. 162 (1883). See also Northern Bank & Trust Co. vs. Day. 83 Wash. 296, 145 Pac. 182 (1915). The point at issue in these cases was whether anything besides surplus profits could serve as a basis for stock dividends.

[37] Illustrative of the provision as actually drafted in practically all of the state corporation laws is that contained in the dividend section of the Uniform Business Corporation Act (1928) (Section 24); the "model" statute proposed: "No corporation shall pay dividends . . . (b) in shares of the corporation, except from the surplus of the aggregate of its assets over the aggregate of its liabilities, including in the latter the amount of its capital stock." Only two states (California and

require that dividends from paid-in surplus be accompanied by public notice as to the source used. One of these states, Illinois, apparently prohibits any dividend out of paid-in surplus except as a dividend on preferred stock.[39]

The legal availability of paid-in surplus as a source of stock dividends may seem proper on several grounds. Creditor protection is not involved here, as no property is withdrawn from the corporation. Also the result is a clarification of the elements comprising net worth. Paid-in surplus represents the excess of contributed capital over stated capital. Hence a transfer, via a stock dividend, of a portion or all of paid-in surplus to stated capital amounts to merging like facts in the sense that both represent the contributed capital of stockholders. Serious objections to stock dividends from paid-in surplus, do, however, exist. The practice may be prejudicial to a particular class of stockholders where there is more than one class of stock outstanding.

It is possible for the paid-in capital of one group to be transferred to a different group, to the obvious detriment of the former. This problem is considered below under a separate head.[40] Furthermore, there is a certain incongruity in the practice because the consideration paid for the original stock issue is made to serve the same purpose again in connection with a subsequent stock issue. Finally, unless the dividend is accompanied with adequate publicity as to source used, the result may be misleading impressions on the part of stockholders as to the earning power of the company involved. As noted above, only four states require the issuer to make adequate disclosure to the recipient of the dividend as to source used in its payment.

Unrealized-Appreciation Surplus

This type of surplus is also a proper legal basis for declaring stock dividends, barring statutory or charter provision to the contrary. Legal pronouncement which may be taken as approving this source goes back to the classic statement found in Williams vs. Western Union Telegraph Company, a case involving the availability of unrealized-appreciation surplus for declaring stock dividends. It was there stated that so long as a dividend "is not a mere inflation of the stock of the company, with no corresponding values to answer to the stock . . . So long as every dollar of stock issued . . . is represented by a dollar of property . . . " a stock may issue.[41] This reasoning has since been adopted by other courts, until today it is generally legal under the common law to declare stock dividends from unrealized-appreciation surplus.[42] The use of appraisal surplus as a source of stock dividends may, of course, be prohibited by statute. So far only two states, California and Minnesota, have written into their respective laws such express prohibition. On the other hand, the common law has been codified in sixteen states.[43] All of these states have taken action

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Minnesota) expressly provide that stock dividends may be declared from paid-in surplus.

Where the "net profits" test as well as the "net assets" test are applicable in a given statute (for such a statute see that of Tennessee), the former may be disregarded on the ground that the two rules are alternatives under the law.

[38] The states are California, Illinois, Minnesota and Ohio.

[39] See Sec. 41 (b) of Act.

[40] See page 250.

[41] 93 N.Y. 162 (1883).

[42] See Berwind, White Mining Co. vs. Ewart 32 N.Y.S. 716 aff'd. 35 N.Y.S. 573 (1895); McGinnis vs. O'Connor 111 Md. 695; 72 Atl. 614 (1909); Northern Bank & Trust Co. vs. Day (1915) 83 Wash. 296; 145 Pac. 182. See also a Missouri case, State ex rel Gentry vs. Bray, 323 Mo. 562, 20 S.W. (2d) 56 (1929); and Soehnlein vs. Soehnlein 46 Wis. 330, 131 N.W. 739 (1911) where the court observed that the Wisconsin statute expressly authorizing stock dividends to the extent they represented a rise in property values, was but declaratory of the common law. The record, however, is not without rulings to the effect that mere enhancement in value of property is no proper basis for stock dividends. See Cole vs. Adams 19 Tex. App. 507, 49 S.W. 1052 (1898). See also Cook, W. W. *op. cit.* 1851; Thompson, S. D. *op. cit.* 88.

[43] The states are Alabama (where valuation of assets for the purpose, however, is restricted to tangibles), Alaska, Arkansas, Florida, Idaho, Illinois, Louisiana, Maine, Maryland, Nevada, Ohio, Pennsylvania, Tennessee, Washington, West Virginia and Wisconsin.

It should be pointed out, however, that most of the statutes cited make no outright statement that stock dividends may be paid from unrealized appreciation. The permission is granted indirectly, the usual wording being that stock dividends may be made from the surplus of assets over liabilities including capital stock, which makes unrealized appreciation count toward surplus available for such dividends.

on this matter in recent revisions of their statutes, which is indicative of a trend among the states to give positive recognition to the availability of unrealized-appreciation surplus for declaring stock dividends.

The declaration of stock dividends from a source other than "earned excess of assets" should, ethically viewed, be accompanied with adequate publicity of the source used. Unrealized-appreciation surplus should prove no exception to this requirement. Yet at the present time the statute of Ohio is the only one that requires such notice to stockholders.

The propriety of declaring stock dividends from the source under consideration is itself, however, open to question, even though the practice is legal and is generally approved by the business community.[44] As to small recurrent stock dividends, the recognized principle is that dividends are paid in shares because the corporation desires to retain its earnings rather than to distribute them to shareholders. That there must be net profits or earned surplus to do either "is fundamentally a matter of business honesty, to be expressed outwardly in the accounts. It is

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Since the statutes referred to represent recently enacted laws, an explanation as to the nature of the change is in order. The change in practically all of the revisions amounted to

(a) giving express authority to declare stock dividends, where none existed formerly.
(b) using the same fundamental concept of a proper dividend base in both the stock dividend and cash dividend sections, but leaving out of the stock dividend section certain specific restrictions thrown around cash dividends in the cash dividend section. (See infra, note 44, Uniform Business Corporation Act for illustration).

[44] The attitude of the legal profession is indicated in the following two excerpts:

(1) From the Uniform Business Corporation Act (1928), Sec. 25, IV:

"No corporation shall pay dividends—(a) in cash or property, except from the surplus of the aggregate of its assets over its liabilities, including in the latter the amount of its capital stock, after deducting from such aggregate of its assets, the amount by which such aggregate was increased by unrealized appreciation in value or revaluation of fixed assets; (b) in shares of the corporation, except from the surplus of the aggregate of its assets over the aggregate of its liabilities, including in the latter the amount of its capital stock."

(2) From (Ohio State Bar Association Committee Report, I Ohio Bar, No. 25 (Supplement, Sept. 18, 1928):

"A corporation should never write up its assets on account of some fancied or estimated unrealized appreciation in value of assets in order to clear a deficit from its balance sheet or to create a surplus to enable it to pay dividends for the reason that shareholders and the public may thereby be misled, but if such action is taken in the open and an honest redetermination of the value to the corporation of its assets is made in the manner in which a determination of such would be made if shares were being issued for a consideration other than cash, no one can possibly be injured for the reason that an equivalent result could be accomplished by the organization of a new corporation and the sale of entire assets to such new corporation."

In a study of unrealized appreciation, made by the 1930 Accounting seminar of the University of Illinois, the conclusion was reached that stock dividends may appropriately be declared from surplus arising out of unrealized appreciation. Reason: the result would be to "merely 'thin out' the stockholders' equity, whatever that equity might be and however calculated. There is no objection to this if the stockholders wish it. There is no question here of 'profits,' divisible or otherwise" (1930) 5 ACCOUNTING REV. 21.

Business men generally approve the practice on a number of grounds (first two reasons are not peculiar to stock dividends declared from appraisal surplus alone):

1. Psychological effect on the stock market is generally to stimulate interest in the stock.
2. A stock dividend is considered the equivalent of a stock split-up, especially where no-par stock is issued. Hence a stock dividend is used to attain the result which a split-up is known to to bring about, namely, better marketability, since the unit price is lowered.
3. Simplifies showing of net worth in that the result may be to leave only one type of surplus, *i.e.*, earned surplus. This result is considered as avoiding confusion on the part of stockholders as to various kinds of surplus.
4. Combines like elements in that both capital stock and appraisal surplus are deemed to represent company's permanent capitalization.
5. Enables increase of capital stock. This may be desired because annual earnings are too high a per cent of the amount of capital stock already outstanding.
6. A possible new ground has appeared since the enactment of the 1936 income-tax law with its provision of surtax on a corporation's undistributed net income. A stock dividend issued (1) under an optional dividend declaration or (2) in stock of a "different class," may be set up as a dividends-paid credit against the amount of undistributed net income to surtax, even though the declaration was from unrealized-appreciation surplus. To illustrate, suppose a corporation's books showed as of January 1, 1936—

Unrealized-appreciation surplus	$100,000
Earned surplus-debit balance	40,000

and for the year 1936—

Net profits subject to surtax	50,000

Neither the Act nor the regulations thereunder would seem to bar the corporation from declaring stock dividends in the amount of $50,000 from the appraisal surplus and applying the dividend, assuming it was in a form taxable to recipient, as a "dividends-paid credit" against the net profits subject to surtax. Under the facts assumed, no surtax would have to be paid. See 1936 Act, section 115; and Regulations 94, chapter XV.

not a matter of judgment or expediency . . . but a matter of truth."[45] Accordingly, unrealized-appreciation surplus has no sound reason in its favor as a basis for recurrent stock dividends, even though legally permissible. As to large occasional stock dividends, the use of unrealized-appreciation surplus for this purpose is objectionable for a number of reasons: (1) The criterion of earnings as the basis for dividend declaration is logically applicable to any stock dividend, large or small. (2) The surplus involved reflects an uncertain basis of asset valuation, a cloak behind which an unscrupulous management may hide with considerable success. The present statutes leave a great deal to the directors' judgment, subject perhaps in the end to review by the courts if anyone raises the question.[46] (3) The rise in the value of fixed assets due to favorable development in the real estate market and general business conditions has very little to do with the propriety of dividend declaration. No greater profits will be realized by a going concern from operations merely because its plant enhances in value,[47] nor are there any "more" assets which the concern desires to retain rather than distribute as dividends.[48] (4) Stockholders usually consider the increased capitalization as the new base on which they will receive in the future regular cash dividends at least at the same rate as before. Unless larger earnings materialize, the result is either a drain on working capital

[45] Dewing, A. S., *Financial Policy of Corporations* (1934), p. 643.

[46] As matters now stand "All a board of directors has to do is to adopt a resolution that such assets have a fair value to the corporation in excess of the amount at which they are carried on the books, and reciting what such estimated value is and causing it to be entered on the books. By this magic, they will create 'an excess of assets' which the corporation may apply to a dividend in shares." Hills, Geo S. and Ballantine, H. S. Corporate Capital and Restrictions upon Dividends Under Modern Corporation Law, (1935) 23 *Calif. L. Rev.* 256.

For a case in which the court sustained the shareholders' objection to a stock dividend from this source, see Pontiac Packing Co. vs. Hancock, 257 Mich. 45, 241 N.W. 268 (1931). According to the report of this case, the company fictitiously wrote up the carrying value of a leasehold to more than six times its previous value in order to create a book surplus from which a 150% stock dividend was declared. See also Whitlock vs. Alexander 160 N.C. 465, 76 S.E. 538 (1912) where the court stated at p. 473, N.C., 541 S.E., that if the directors "have declared a dividend and issued stock for it by an excessive overvaluation of property . . . this would be evidence from which fraud could be inferred, and in extreme cases, it might . . . be regarded as conclusive."

It seems that shareholders receiving dividend stock from fictitious write-up of assets are subject to further liability on the insistence of subsequent creditors, in the event of insolvency. See Whitlock vs. Alexander, supra; Ballantine, H. W., Corporations 516 (1929).

[47] Most instances of asset write-up pertain to so-called fixed assets. As to availability of stock dividends based on unrealized appreciation of current assets, the point does not seem to have come before the courts. The statutes are silent on this point, though many of the recently revised corporation acts expressly exclude such source as a basis for cash dividends. By implication, surplus arising from this source is statutorily available for stock dividends. No sound reason, however, occurs to the writer in defense of the practice. The practice should be declared unlawful. In the first place, it must be remembered that allowance of stock dividends out of unrealized appreciation of fixed assets is itself an exception to the recognized principle that dividends be cased on earnings, and even this departure is, as stated above, subject to criticism. In the second place, there is a basic difference between current and fixed assets that justifies positive prohibition in one case and reasonable limitation in the other in regard to the question at hand. As stated by two well known writers—

"The difference in quality between a fixed asset and a current asset suggests that more liberty ought to be allowed the practice of depicting the unrealized appreciation of a fixed asset than of a current asset, on the theory that the very nature of a current asset contemplates its convertibility into cash within a limited period. Accordingly, there would seem to be little ground for giving any indication whatsoever of unrealized appreciation to current assets—let the deed of conversion tell its own story . . . "Berle, A. A. Jr., and Fisher, F. S., Jr. Elements of the Law of Business Accounting (1932), 32 *Columbia Law Rev.* 592.

It should perhaps be emphasized that appreciation is not less real in the case of current assets as compared to fixed assets—the reverse is generally true—but that the time of conversion into cash is so near at hand that the "deed of conversion" may well be left "to tell its own story."

[48] Leaving aside the questions of realization and errors in accounting for property costs, the enchancement in asset value is "real" only to the extent that the increase is adjusted for a possible intervening change in the value of money. If this correction is not applied and the practical difficulties of making the correction all but preclude its application, the increase in money value is a compound of diverse elements. As stated in note 31, these elements fall into three major divisions: unrealized increment, appreciation due to decline in value of the money unit and, possibly, accounting errors of prior years causing understatement of book value of property. Because a rising price level, with its attendant managerial problem of higher replacement costs, has in the past been largely the cause of appraisals of industrial properties, a fair inference is that appreciation due to decline in value of the money unit has loomed large as compared to the other elements mentioned in the creation of appraisal surplus. If this is true, the temporary nature of a substantial part of appraisal surplus is apparent—it will fluctuate with the

or downward revision of the cash dividend rate due to greater capitalization. (5) Finally, the practice tends to confuse what significance the carrying of assets at replacement costs may have for managerial purposes[49] with the more or less independent question of the expediency of utilizing the resulting appraisal surplus to increase company's capitalization.[50]

In some instances, however, stock dividends from unrealized-depreciation surplus may represent a proper business expedient.

movement of the general price level—and the wisdom of capitalizing surplus of this kind is very much open to question.

[49] See references given in note 31, *supra*.

The practice also defeats the orderly amortization of appraisal surplus over the life of the appreciated asset. There are a number of methods by which the amortization may be effected, but all of them fall under one or the other of two main approaches:

(1) Operations charged with depreciation based on appraisal value—Net profit for the year is decreased by the amount of depreciation on appreciation charged against operations. At same year's end, however, the amount in question is transferred from appraisal surplus to earned surplus. Earned surplus is thus unaffected.

(2) Operations charged with depreciation based on actual cost—Net profit for the year reflects depreciation expense based on actual cost. At year's end, the amount of depreciation on appreciation is transferred from appraisal surplus to reserve for depreciation.

When the asset is fully depreciated, the end is the same as if actual costs had been used throughout the life of the asset. This is because the ultimate effect on asset, surplus and depreciation reserve accounts is the same whether actual cost or one of the two variants of accounting for depreciation on appreciation is used.

The difference between (1) and (2) lies in the amount absorbed into annual operating costs as depreciation expense. (1) is preferred over (2) by those who advocate that the resulting higher depreciation expense under (1) will have a desirable effect on selling-price policy. Method (1) is also urged on the ground of consistency. The point here is that operations are charged with depreciation based on the carrying value of assets, which is the procedure generally followed with respect to other assets subject to depreciation. The effect referred to is in the nature of setting selling price of products high enough to provide for eventual replacement of the equipment in question at the expected higher cost level. We join Professor H. A. Finney in observing that "the manufacturer using old, low-cost machinery can advance the selling price of his product in order to provide for the replacement of his fixed assets, without overstating his actual present depreciation and misstating his costs and profits. Basing depreciation on replacement costs, therefore, appears a good deal like the precaution of the suburbanite who keeps his watch five minutes fast to avoid missing the train." *Principles of Accounting*, I (1934), 284.

The amortization procedure described above under either method (1) or (2) would be out of favor with those who advocate the maintenance of invested capital as measured by the appraisal. This argument, however, does not directly concern the stock dividend question. The argument has been most fully developed in the writings of H. W. Sweeney who believes that accounts should periodically be adjusted to reflect changes in the general price level. Under Sweeney's concept of capital and income, there is no place for such a term as "unrealized-appreciation surplus," but simply "appreciation surplus." Income, according to Sweeney, consists of net economic increase, whether or not realized, as measured by the increase of the general-purchasing-power-equivalent of net assets between two points of time. See, Sweeney, H. W., *Stabilized Accounting* (1936), for a detailed discussion of the problem.

[50] The argument that an equivalent result is obtained by the method of reorganization is sometimes advanced to justify stock dividends from unrealized appreciation surplus.

Assume a reorganization, the result of which is that the entire assets of old company are sold to new company, the new company then having an increased capitalization, although its assets are the same as those of its predecessor. The criticism here is that the argument referred to overlooks the distinction between (a) a reorganization involving a newly organized company with its own share structure, as against (b) stock dividends by a going concern.

In (a), exchange of shares, new for old, takes place, and stockholders are not apt to misinterpret what takes place. The reorganization is ordinarily made subject to approval of stockholders, who are informed of the plan of reorganization. The recapitalization upward is thus made to stand the test of stockholders' scrutiny. The possibility of manipulation is at least reduced if not prevented.

In (b) the receipt of additional shares of the same stock is likely to be construed as resulting from earnings unless a clear disclosure as to dividend base is made, and may lead to unjustified inflation of the market value of the shares, thereby misleading stockholders and prospective buyers of the stock.

From a sound financial view, it seems entirely unwarranted to make the basis of booking assets subject to alteration merely because of a change in legal entity. If the objections to the practice of declaring stock dividends from unrealized appreciation surplus, as stated above, are deemed valid, the avenue of escape could be legally barred by a statute to the effect that the same result could not be attained by the method of reorganization, so long as there was no material change of beneficial interests accompanying the change in legal entity.

Is the reorganization discussed above any different from a merger of several companies, as a result of which the amount of capital stock issued by the consolidated unit is in excess of the total amount of capital stock issued by the constituent companies, because of the booking of assets at a higher valuation for the purposes of the consolidation? Viewed legally, the present case is indistinguishable from the preceding one. Here, as before, a sale of assets by a vendor company is legally tantamount to a "closed transaction." The financial effect of the present case is, however, materially different. The merger brings together the separate stock equities in a number of companies. This usually requires revaluations of the contributions of each in order to obtain comparability of the units for the purpose of the division of the stock equity in the consolidation.

The practice would seem to be justified where the element of unrealized increment represents practically the entire "appreciation." Examples are land not used in operations, but held as an investment, or land reclaimed through recession of waters, and timber and mineral properties awaiting development. Unrealized-appreciation surplus of the kind here considered may well be added to the permanent capitalization of the corporation if the sale of the appreciated assets is a matter of the remote future and it is desired to show in the intervening time the corporation's permanent capital for the information of creditors and stockholders.

Summary on the Necessity of Profits or Surplus

Earned surplus is the basis par excellence for dividend declarations, irrespective of the medium of payment used. Stock dividends are simply one of the forms in which dividends may be paid, and in this sense fall within the pale of the statement just made. It was seen that paid-in surplus may legally serve as a source from which to declare stock dividends. While the use of this source appears also to be a proper business expedient, the objections raised would seem on the whole to counterbalance the advantages given. It is generally legal to use unrealized appreciation surplus as a basis for stock dividends, but the desirability of such practice is open to serious question for the reasons stated. The position of the law on this matter is due to but a partial recognition of the real nature of stock dividends. The law recognizes a stock dividend as a means of recapitalization, but seems to forget that it is also a form of dividend payment. Restricted to the first aspect, it is not surprising that the law considers the problem as involving issuance of shares for property, which is a matter subject only to the rule of "good faith" or "reasonable care" in the valuation of property.[51] The second and equally important aspect, as a form of dividend payment, seems so far to have been generally neglected. Recognition of the two related but distinct aspects of stock dividends must, therefore, be generally expected to be a condition precedent to the tightening of the legality of declaring this type of dividends from unrealized-appreciation surplus.

CAPITALIZATION

Since shares issued as a stock dividend increase the amount of capital stock, it is necessary to ascribe a "consideration" to shares so issued. The consideration is found in the amount transferred from surplus to capital stock. In general, the principle is that this amount must be sufficient to act as "payment" for the issue of the dividend shares. Common law expressions of this principle take various forms, but all of them sustain a stock dividend where an amount "equivalent to" or "attributable to" the share dividend is added to capital stock.[52] The express provisions in the statutes on the amount to be capitalized on the occasion of a stock dividend are discussed below.

Where Par Value Shares Are Issued

The application of the principle just stated to par value shares requires that capital stock be increased by an amount transferred from surplus equal to the aggregate par value of the dividend shares issued.[53] Existing corporation laws enforce this principle largely by implication.[54] Some eleven states, however, have laws which specifically cover the point. Of this number, five employ practically identical language and write into the law the principle already stated.[55] Four employ language which conveys the impres-

[51] Weiner, J. L., "Theory of Anglo-American Dividend Law" (1932), 32 *Columbia Law Rev.* 981.

[52] See Sexton vs. Percival Co., 189 Iowa 586, 177 N.W. 83 (1920); Alsop vs. DeKoven, Ill. App. 190, 209 aff'd. 205 Ill. 309 (1903). See also Williams vs. Western Union Telegraph Co., 93 N.Y. 162 (1883), where the court stated that a stock dividend is lawful when every dollar of stock issued is represented by a dollar of property in possession of the issuer.

[53] See foregoing note.

[54] By implication in that—(1) the surplus capitalized must correspond to the increase in capital stock; *i.e.*, the number of shares issued times the par value per share; otherwise under the "net assets" test, the dividend would be unlawful. (2) The definition or the method of computing stated capital, in those states which statutorily provide for stated capital, requires the capitalization of surplus by an amount equal to the the aggregate par value of the dividend shares issued.

[55] The statutes are those of California, Illinois,

sion that the amount capitalized must be *at least* equal to the total par value of the dividend shares issued.[56] The remaining two have peculiar constructions but result in requiring that the amount capitalized be equal to the par value of the shares issued.[57]

Where No-Par Value Shares Are Issued

Dividends paid in no-par value shares[58] are also subject to the legal principle that no shares may be issued without a consideration. The amount of the consideration is not, however, as easily determinable as in the case of par value shares. A stock dividend in par value shares must be issued at par, but a no-par stock dividend may be issued at any value specified by the board of directors,[59] subject of course to implied or express statutory or charter provisions on this point.

The statutory limitations are of two classes. (1) Some statutes specify a minimum value (stated value) below which a share may not be carried, in which case the implication would seem to be that the minimum amount of surplus capitalized must be equal to the aggregate stated value of the dividend shares issued. The effect of a no-par stock dividend on surplus is, under this condition, similar to that of a dividend in shares having par value. (2) Express provision on the point is found in the dividend sections of eleven state statutes. Of this number, eight give the directors wide discretion as to the amount of surplus to be capitalized, if any, and the number of shares to be issued: three provide that the directors shall fix the number of shares and the amount to be capitalized;[60] five provide that the shares shall be issued at such value as shall be fixed by the directors.[61] Of the remaining three, two have constructions which are nearly alike and provide that surplus shall be capitalized to the extent of (a) the amount of preference upon involuntary liquidation of "preference shares" and (b) the estimated fair value of "common shares," as determined by the directors.[62] The other

Minnesota, and Pennsylvania. The Illinois provision reads as follows (Sec. 41(e)): "If a dividend is declared payable in its own shares having a par value, such shares shall be issued at the par value thereof, and there shall be transferred to stated capital at the time such dividends are declared, an amount of surplus equal to the aggregate par value of the shares to be issued as dividends."

[56] The statutes are those of Idaho, Louisiana, New Hampshire, and Washington. These statutes have followed closely the relevant provision in the Uniform Business Corporation Act (1928), which reads as follows (Sec. 24, VI, (a)): "If the dividend is to be paid in shares having a par value, the aggregate par value of such shares shall not exceed the amount of that portion of the corporation's surplus which is transferred to capital as payment for such shares." The ambiguity of this wording is apparent. If the amount of surplus transferred exceeds the aggregate par value of the shares issued, how would the excess over par be credited? Debit surplus and credit surplus? A possible explanation is that surplus may be transferred to capital stock without a corresponding issue of capital stock, even where par stock is involved.

[57] The states are Tennessee (surplus must be "reduced in amount equal to the value of the stock issued"), and West Virginia (consideration for stock issued as a dividend "shall be taken to be the capitalization thereby of the surplus . . . of the corporation").

[58] The use of no par value shares is of comparatively recent origin. The first law permitting no par shares was passed by New York in 1912, and up to 1917, only one other state, Maryland, had such a law. By the next decade, however, the corporation acts of practically every state permitted the issue of no-par shares for at least certain types of corporations. See Wildman, J. R. and Powell, W., *Capital Stock Without Par Value* (1928), ch. 2.

[59] Since most of the no-par stock laws give directors wide discretion as to the price at which no-par shares may be issued upon sale, it would seem that they also have the power to determine the amount that shall be transferred from surplus to stated capital upon the issue of no-par stock dividends. Moreover, many cases are on record where no-par-stock corporations have paid no-par stock dividends and at the same time transferred little or nothing from surplus to stated capital on account of the new shares issued. Legally, the question of whether a stock dividend payable in no-par shares must be accompanied by a transfer from surplus to stated capital is open for judicial interpretation in jurisdictions not subject to express or implied statutory stipulations. Until some one raises the question in such jurisdiction, one cannot go further than to state the presumption that no-par shares are no exception to the common-law rule that no shares may be issued without a consideration.

[60] The statutes are those of Idaho, Louisiana, and Washington. They follow the relevant provision of the Uniform Business Corporation Act (1928) which reads as follows (IV (b)): "If the dividend is paid in shares having no-par value, the number of such shares shall be fixed by the board of directors."

[61] The statutes are those of Illinois, Indiana, Pennsylvania, Delaware, and Ohio. The Illinois provision reads as follows (Sec. 41 (f)): "If a dividend is declared payable in its own shares without par value, such shares shall be issued at such value as shall be fixed by the board of directors by resolution at the time such dividends are declared, and the amount of surplus equal to the aggregate value so fixed in respect of such shares, and the amount per share transferred to stated capital shall be disclosed to shareholders receiving such dividends, concurrently with payment thereof."

[62] The statutes are those of California and Minnesota.

statute specifies that the amount capitalized per share must at least be equal to the average original consideration carried as capital for each share of the given class at the time the dividend is declared.[63] The statutes of only two states (California and Illinois) require that the issuer notify the shareholder of the amount per share transferred to capital stock.

Needed Changes in Statutes

If the dividend stock has a par value and there is no paid-in surplus from the sale of the original stock, the rule stated above is reasonable enough as a minimum standard for the charge to surplus. However, use of a low stated value per share accompanied with a large paid-in surplus has become so widespread in recent years that the present par value and no-par, stated-value standards of capitalization seem inadequate. It is submitted that in the per share paid-in value of stock, with or without par, is found a sound basis for the amount to capitalize on the occasion of stock dividends. Only through observance of such a standard is it possible to maintain (1) the integrity of the paid-in capital per share and (2) a rational distinction between stock split-ups and stock dividends. Statutory capitalization provisions should be changed to conform to the principle referred to. Shortly stated, the rule is as follows: The minimum measure of the charge to surplus should be the sum of the per share capital stock and paid-in surplus to the credit of the class of stock in which additional shares are about to be issued as stock dividends.

If the dividend stock is in the form of no-par preferred shares, with or without stated value, the per share capitalization should be the liquidation preference price or redemption price, whichever is higher.

[63] The statute is that of Michigan and Sec. 22 reads as follows: "There shall be transferred to capital at least the equivalent in value per share of such dividend as equals the average original consideration amount per share of the shares without par value outstanding at the time of such declaration which is carried as capital." In other words, any shares added to stated capital through making stock dividends must at least have the same equality as the average of like shares previously existing in the amount of legal capital.

A final suggestion is that the amount of surplus capitalized upon the distribution of stock dividends, both as to aggregate amount and amount per share, should be disclosed to the recipients of such dividends.

The foregoing suggestions will prevent the undesirable practice of alloting to low-stated-value shares, with or without par value, as dividends, and capitalizing those shares only a minimum nominal amount per share, and of misleading many stockholders as to the distributor's earning power or financial status.[64] General adoption of the above suggestions in the various state statutes will materially safeguard the interests of the investing public.

STOCK DIVIDENDS BY CORPORATIONS WITH TWO OR MORE CLASSES OF ISSUED STOCK

In stating the legal effect upon issuer and recipient of a stock dividend, the courts have generally adhered to the principle that nothing of value is taken from the corporation and nothing of value is added to the interest of the shareholder.[65] Overlooking the question of the effect a stock dividend may have upon the market value of the shares involved this statement may be accepted as true where it concerns a corporation with shares all of one class. In this case, a stock dividend constitutes a subdivision of the shareholders' interest into more shares representing the same interest. On the other hand, the principle stated is manifestly untenable where it

[64] See Hoshour, H., The Minnesota Business Corporation Act (1934), 17 *Minn. Law Review* 700; Ballantine, H. W. and Hills, G. S., Corporate Capital and Restrictions Upon Dividends Under Modern Corporation Laws (1935), 23 *Calif. Law Rev.* 257; Berle, A. A., Jr., and Means, G. C., *The Modern Corporation and Private Property* (1932), 167.

[65] "A stock dividend really takes nothing from the property of the corporation, and adds nothing to the interest of the shareholders. Its property is not diminished, and their interests are not increased. After such a dividend, as before, the corporation has the title in all the corporate property; the aggregate interest therein of all the shareholders is represented by the whole number of shares; and the proportional interest of each shareholder remains the same. The only change is in the evidence which represents that interest, the new shares and the old shares together representing the same proportional interest that the original shares represented before the issue of the new ones." Gibbon vs. Mahon, 136 U.S. 549, 559 (1890).

concerns a corporation with two or more classes.[66] Here, from the shareholder's side, the result may amount to a shift as between the several classes of shares of certain rights in the corporation, with the effect of altering the relative positions of the various classes of shares. These rights may pertain to (a) rights in earnings, (b) rights in assets distributed at dissolution, or (c) right to a voice in management through voting power. From the corporation's side, the result is a realignment of its share structure, perhaps with commitment to new financial obligations where none existed before.[67] It is the purpose of the present section to inquire what checks the statutes and common law provide against the shifting of one or more of the rights mentioned from one class to another, through the device of stock dividends,[68] without the consent of the holders of the classes of shares adversely affected.[69]

Most of the existing corporation acts do not attempt to control the method of paying stock dividends from the standpoint of protecting the shifting of rights from one class of stock to another. Among the recently revised acts are a few, however, which lay down specific restrictions. Six states require, in the absence of specific relevant provisions in the articles, the consent or vote of a majority of the holders of shares of the class in which the dividend is made where the dividend is paid to shareholders of a different class.[70] Two states have peculiar restrictions. One (Illinois) prohibits the payment of dividends in shares preferred as to dividends over the shares upon which such dividends are declared, in the absence of specific power granted in the articles.[71] The other state

[66] The methods of payment possible under this condition may be summarized as follows:

1. A dividend of common shares paid to shareholders of (a) the same or (b) a different class.
2. A dividend of preferred shares paid to shareholders of (a) the same or (b) a different class.

[67] Such as in the case of dividends paid in preferred shares cumulative as to dividends.

[68] For a discussion of other mechanisms used by corporate directors to accomplish changes in participation rights in assets, earnings and voice of management, as between classes of stock, see Berle, A. A., Jr., and Means, G. C., *op. cit.*, chapters 2 and 3.

[69] The discussion does not concern shiftings in the several rights accomplished by altering the underlying contract by which participation in these rights have been regulated. Alteration of the underlying contract is accomplished as a financial matter either by amendment of the certificate of incorporation or by change in legal entity through reorganization or merger where the same management continues control after the change in entity. See Berle, A. A., Jr., and Means, G. C., *op. cit.*, chapter 4.

[70] The statutes are those of Idaho, Indiana, Louisiana, Minnesota (written consent or vote of ⅔ required), Pennsylvania, and Washington. The statutes follow the relevant provision of the Uniform Business Corporation Act (1928), which reads as follows (Sec. 24, VI (c)):

"No dividend payable in shares of any class shall be paid to shareholders of any other class unless the articles so provide or such payment is authorized by the vote of the holders of a majority of the shares of the class in which payment is to be made."

This provision is open to criticism for being incomplete. It leaves unprotected other classes of shares than the ones in which the dividend is made. That these classes stand to lose under certain circumstances is illustrated in the case of a stock dividend paid in preferred shares or on the outstanding shares of the same class. A provision which is to safeguard the interests of all classes would seem to need a wording such as the following: The declaration of stock dividends shall be made subject to the approval of the majority of shareholders of each class adversely affected.

[71] The provision is as follows (Sec. 41 (d)): "No dividend payable in its own shares shall be paid in shares having a preference as to dividends over the shares upon which such dividends are paid unless the payment thereof be authorized by the articles of incorporation."

For a discussion of the danger of abuse which this provision seeks to remove (namely, diluting the interest of preferred shareholders), see Berle, A. A., Jr., and Means, G. C., *op. cit.*, p. 197.

The protection under the Illinois law is, however, a one-sided one, as the directors may issue similar or junior shares as a dividend. This may have the effect of diluting the interest of the common shareholders, as in the case of paying preferred shareholders dividends in common shares. Assume, for example, a corporation with—

(1) $100,000.00, 6% cumulative, nonparticipating preferred, par value $100.00 per share
(2) $100,000.00 common (authorized $200,000.00 par value $100.00 per share
(3) $66,000.00 of earned surplus
(4) No preferred dividends in arrears

Suppose the current preferred dividend is paid with $6,000.00 of common stock. The resulting change in equities is as follows:

Particulars	*Before Dividend*	*After Dividend*
Total common stock equity—		
1,000 shares	$160,000.00	
1,060 shares		$166,000.00
Common stock equity per share—		
160,000/1,000	160.00	
166,000/1,060		156.60

To remove this possible danger of abuse, the prohibition in the law should be broadened to cover any stock divi-

(Ohio) prohibits the payment of any dividend to a given class of shareholders in violation of the rights of any other class.[72]

When there is no express statutory or contractual provision covering the method of paying a stock dividend, it is apparent that the matter is left to the discretion of the directors, subject to judicial review if a case reaches the courts. The reported cases are not numerous. Moreover, the comparatively few decisions that do exist deal with the question of whether preferred shareholders after payment of the preferred dividend are entitled to participate further in a dividend of common stock along with the common shareholders. The authorities are divided into two opposing views.[73] Discussion of the cases will therefore proceed under one of two heads according to the decision.

Preferred Shareholders' Rights Are Limited to Stated Preferences

The general view here is that the preferred shareholder is entitled to his stated dividend and no more.[74] This seems also to be the majority view.[75] Adherence to this principle, however, raises a number of problems which make its application under certain conditions unsound. Consider, first, preferred stock preferred as to dividends and assets at dissolution and entitled to equal voting

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dend paid which operates to affect adversely the rights of holders of one or more classes of shares, in the absence of specific permission in the articles to pay such dividends.

[72] Prohibition under such a general provision is open to criticism for being too vague.

[73] 12 Fletcher, *op. cit.*, 194 ff.; (1927) 52 A.L.R. 213; (1934) 98 A.L.R. 1515. The following articles discuss the problems involved at length: Thompson, G. J., "The Respective Rights of Preferred and Common Stockholders in Surplus Profits" (1921), 19 *Mich. L. Rev.* 731; Christ, J. F., "Rights of Holders of Preferred Stock to Participate in the Distribution of Profits" (1929), 27 *Mich. L. Rev.* 731; and Rowell, J. H., "Rights of Preferred Shareholders in Excess of Preference" (1935), 19 *Minn. L. Rev.* 406.

[74] Three representative cases following this general rule may be briefly analyzed.

(a) *Niles v. Ludlow Valve Mfg. Co.*, 202 Fed. 141 (1912), writ of certiorari denied, 231 U.S. 748 (1913).

According to the facts, the defendant corporation had four thousand shares of cumulative preferred stock, preferred both as to dividends (8% per annum) and as to capital, and entitled to equal voting power with the common, and three thousand shares of common stock. At a special stockholders' meeting, the directors were authorized to declare from surplus a 100% dividend of common stock to the holders of common. Plaintiff was a nonconsenting holder of one hundred shares of preferred, who sought to enjoin the distribution of the share dividend unless the preferred were allowed to participate in it. The bill was dismissed and the court, after referring to the favorable situation of the preferred shareholders, said at p. 143:

"In addition to these advantages it is now asserted that though they bear no share of the burden when the business is unsuccessful, they should share equally with the common stockholder when it is prosperous. We venture to think that very little of the common stock would have been subscribed, if it had been stated at that time that such were the conditions which surround it. The common stockholders bear substantially all the losses of adversity and are entitled to the gains of prosperity. A contract that they should assume all the risk with no corresponding advantage should be clearly established. We find nothing in the law or in the certificates or in the past action of the defendants to indicate that anyone connected with the business supposed that the preferred stockholders were to share equally in the surplus applicable for dividends."

(b) *Stone v. U. S. Envelope Co.*, 119 Me. 394, 111 Atl. 536 (1920).

The reported facts indicate that the defendant corporation had preferred stock which was preferred both as to dividends (7% per annum) and as to capital, and (according to the by-laws) entitled to equal voting power with the common. The directors offered some 2500 shares of unissued common stock to both preferred and common holders in proportion of their respective holdings at $150.00 per share, a "price materially below its value." Plaintiff was a holder of 1,000 shares of common and sought to enjoin the corporation from selling the stock to preferred shareholders on the ground that the stock was in effect a dividend in the amount less than the market value, and that the preferred shareholders had no right to share in profits above the amount of their stated preference.

The bill was sustained by the court on the ground that to do otherwise would run counter to what is the prevalent understanding of the investing public, namely, that a buyer of preferred stock acquires it with the expectation that he will be limited to the amount of the preference.

"Where nothing to the contrary appears, the creation of preferred stock prima facie implies that the preferential rights of the stockholders are given in lieu of and to the exclusion of the equality in participation which would otherwise (without the preference) exist" (at p. 399 Me., 538 Atl.). This is because "the phrase 'preferred stock' holds out to the ear of the ordinary investor no promise of participation in earnings beyond his preferential dividends" (at p. 398 Me., 538 Atl.).

(c) *Tenant v. Epstein*, 356 Ill. 26, 189 N.E. 864 (1934).

The facts show that the corporation had issued 30,000 shares of preferred stock, par value $5.00 per share, and, according to the articles, bylaws, and stock certificates, preferred as to dividends and capital, and entitled to equal voting power with the common. The stock certificates, however, had an express limitation not stated in either the articles or bylaws, namely, that the preferred shareholders were to receive dividends of 7% per annum *and no more*. The corporation also had issued 2,000 shares of common stock, par value $5.00 per share. Subsequently, a dividend was declared, consisting of one share of common stock for each share

rights with the common. A dividend of common stock to common shareholders alone may, under the circumstances, upset the existing ratio of power in control as between preferred and common shareholders in favor of the latter. The decisions of the Niles and Stone cases[76] overlooked this question. The decision in the Tenant case[77] recognized the point, and for that reason declared invalid the stock dividend paid on the common stock as well as on the preferred. The remedy which should be open to preferred shareholders here is (a) to enjoin the dividend altogether; (b) to require the divided to be paid in nonvoting stock or in cash; or (c) to demand a right to share in the stock issued by paying book value.[78] Consider, next, pre-

outstanding, common and preferred. As a result of the dividend, Tenant's holdings of common (from an original of 500 shares of common and 2,000 shares of preferred) increased to 3,000 shares; and the Epsteins' (who as a family owned the remainder of the stock) holdings of common (from an original of 1,500 shares of common and 28,000 shares of preferred) increased to 31,000 shares of common. A cash dividend was afterwards declared on all the common stock. Tenant objected to the sharing of the preferred in the share dividend and the ensuing cash dividend on the ground that the preferred shareholders were not entitled to anything beyond their stated preferences as to dividends and assets.

The court held that the share dividend was invalid and should be set aside. After citing with approval the decisions of the Niles and Stone cases, the court went on to say:

"We think the results reached [in these cases] . . . are more nearly in accordance with business usage and the expectations of investors when they purchase preferred shares of stock . . . We think the reasoning of these cases applies here" (p. 36, Ill., 868 N.E.). In another part of the decision the court said:

"Where the stock certificate stated that the preferred stock should receive from the surplus or net earnings of the corporation dividends at the rate of 7% and no more* . . . that would seem to be a complete delimitation of the rights of the preferred stock. It certainly negatives an equal distribution of the surplus of the company after the payment of the preferred dividends" (p. 35, Ill., 868 N.E.).

[75] Besides cases in Note 74, *supra*, see Scott vs. Baltimore R.R. Co. 93 Md. 475, 49 Atl. 327 (1901); Shimmon vs. Nat'l Screw & Tack Co. 18 Ohio N.P. (N.S) 569 (1916); Duwelius vs. Champion Paper Fiber Co. 25 Ohio N.P. (N.S.)107 (1924), aff'd. 22 Ohio L.R. 600 (1935); Powers Foundry Co. vs. Miller, 166 Md. 590, 171 Atl. 842 (1934); for an English case see, Will vs. United Lanket Plantations Co. Ltd., 2 Ch 571 (1912), aff'd. A.C. 11, 83 L.J. Ch. (N.S.) 195 (1914).

[76] See Note 74, *supra*.

[77] See Note 74, *supra*.

* In another part of the decision, however, the court stated that the articles alone would have limited the preference. "It was not necessary in the stock certificate to use the words 'and no more' to limit the payment to 7% per annum" (p. 38, Ill., 870 N.E.).

Thus this recent case adheres to the principle laid down in the previous cases of this note, namely, that unless there is an express provision making the preferred stock participating, the preferred shareholders are to be limited to the preference stated in the contract. In the instant case the whole share dividend was set aside by the court, apparently on the ground that to permit the share dividend on the common shares would reduce the proportionate voting strength of the preferred shareholders.

[78] The last alternative remedy mentioned is based on the preferred shareholder's preemptive right to buy stock at its book value in order to preserve his proportionate voting influence. See the discussion in an article by Victor Morawetz, The Preemptive Rights of Shareholders (1928), 42 Harvard L.R. 186, 195.

The computation of book value and hence the proper issue price of stock under the alternative referred to may be illustrated by employing the facts reported in the Niles case discussed in Note 74, *supra:*

The corporation had outstanding 3,000 shares of common and 4,000 shares of preferred, both having a par value of $100.00 per share. There was a surplus of $500,000.00. The preferred shares were preferred as to dividends and capital interest, and had equal voting rights, share for share, with the common. The directors decided to issue a dividend of 3,000 common shares to common shareholders. To protect the preferred shareholders' voting influence, they could be given the right to subscribe to the new stock on the same terms as the new stock is issued to anyone else. This would mean that the preferred stockholders could pay in cash an amount per share which is equal to that "paid" by the common stockholders through the capitalization of surplus.

The capital structure of the company before the contemplated issue of stock is as follows:

	Total Shares			
Class	*Number*	*Book Value*	*Voting Power*	*Book Value Per Share*
Common	3,000	$300,000 par	3/7	
		500,000 surplus		
		$800,000 total		266.67
Preferred	4,000	$400,000 par	4/7	100.00

To preserve the voting power of preferred stockholders, the division of the 3,000 shares of dividend stock should be as follows:

Ratio	*Number of Shares*
3/7	1,285.7 to common stockholders
4/7	1,714.3 to preferred stockholders
	3,000.0

The issue price for the 1,714.3 shares allocable to the preferred stockholders is computed as follows:

Book value per share of common stock to common stockholders before stock dividend ($800,000 divided by 3000)	$266.67
after stock dividend ($800,000 divided by 4285.7)	$186.67
Issue price per share of new common allocated to preferred stockholders, if common stockholders' equity is not to be diluted	$186.67

ferred stock preferred as to dividends, but in all other respects (i.e., as to voting rights and share in assets at dissolution) enjoying equal participation with the common. Such preferred shareholders stand the risk of loss in proportionate voting influence and in the proportionate interest each share would carry in the net assets of the corporation at dissolution, if a stock dividend is made on common stock only. The remedy which should be open to preferred shareholders here is to (a) enjoin the dividend altogether; or (b) to require the dividend to be paid in cash.[79]

The foregoing discussion dealt with the payment of a dividend of common stock. It is apparent that the same problems would exist where a dividend of preferred stock was involved and would operate even more vigorously to the detriment of the preferred shareholders in the situations mentioned.

Preferred Shareholders' Rights are Not Limited to Stated Preferences

Under this view, preferred shares are held to be participating unless expressly limited by contract. Accordingly, a preferred shareholder is entitled to his stated preference and is further entitled to share equally with the common in any distribution after the latter was received an amount equal to that paid the preferred. This view is supported by a minority of the courts, having been followed in a series of Pennsylvania cases,[80] in a New Hampshire case,[81] and in a Virginia case.[82] The premise on which this view rests is that all stock is basically equal; and that stated preferences add to the rights of certain

The capital structure of the company after the issue of the 3000 shares, assuming that the preferred stockholders exercise their right to buy new common stock at the indicated price is shown below. The preferred stockholders still hold 4/7 of the voting power, consisting of 4,000 shares preferred stock and 1,714.3 shares of common stock.

Class	*Number of Shares*		*Capitalization or issue price per share*	*Net worth*	
Common	3,000	original		$ 300,000	paid-in originally
	1,285.7	dividend	186.67	239,988	surplus capitalized
	1,714.3	sale	186.67	320,000	paid-in by preferred stockholders
	6,000.	Total		859,988	
				260,012	Free surplus
				$1,120,000	Total equity of common stock
Preferred	4,000			400,000	
				$1,520,000	Total net worth

[79] While it is true that if the voting control lies in the hands of the common shareholders, the surplus will probably be declared in cash anyway, before dissolution or reorganization, so as to leave nothing for the preferred, it must be remembered that such an action is within the contractual agreement. The cash dividend merely reduces the preferred shareholders' rights in surplus to zero. On the other hand, the declaration of a stock dividend operates as a direct invasion of this right, and a bill to enjoin the dividend should be sustained by the court.

[80] See Fidelity Trust Co. vs. Lehigh Valley R. R. Co., 215 Pa. St. 610, 64 Atl. 829 (1906); Sterling vs. Watson 241 Pa. St. 271, 88 Atl. 433 (1913); Sternbergh vs. Brock, 225 Pa. St. 279, 74 Atl. 166 (1909); Englander Osborne 261 Pa. St. 366, 104. Atl. 614 (1918).

[81] Jones vs. Concord & Me. R.R., 67 N.Y. 234, 30 Atl. 614 (1892).

[82] Riverside & Dan River Cotton Mills, Inc. vs. Thomas Branch & Co. 147 Va. 509, 137 S.E. 620 (1927). This is a representative case adhering to the view under discussion and may be briefly analyzed.

Plaintiff was the owner of a number of shares of preferred stock preferred as to dividends (6%) cumulative and entitled to equal voting power with the common. The preferred stock was not preferred as to assets at dissolution. Upon the declaration of a 25% share dividend payable in common stock to common shareholders only, plaintiff sued the company in assumpsit for damages sustained by him because of the company's refusal to divide the stock dividend between preferred and common shareholders.

The lower court's decree in favor of the plaintiff was affirmed. The plaintiff was awarded damages amounting to the market value of the shares the court held should have been issued to him. Two reasons were advanced by the court for its decision: The stock dividend decreased preferred sharedholders' rights in assets at dissolution and also decreased their proportionate voting strength. " . . . a distribution of shares of stock . . . as a stock dividend to common stockholders alone, when the preferred stockholders are preferred as to dividends only, seriously affects the interest of the preferred stockholder in the corporation, affecting his voting influence and diminishing his interest in the assets of the corporation. . . . The issuance of a stock dividend to the common stockholders to the exclusion of the preferred stockholders, is an impairment of the rights of the latter which entitles them to relief in equity if the stock has not been delivered, or to damages for breach of a contract obligation if it has." (at p. 517 Va., 623 S.E.)

shares without presumptively subtracting anything from rights already existing. This premise is of doubtful validity. The rights of preferred shareholders are contractual, and the terms of the contract are controlling.[83] In the absence of express agreement, it is submitted that the court's guide should be the principle that preferred shareholders are limited to stated preferences. It is believed that this is generally the sounder principle. Some of the problems arising from the application of this principle, however, together with suggested remedies, were noted in the preceding section.

Avoidance of the use of the terms "participating" or "non-participating" when drawing up preferred shareholders' rights in the underlying contract, and statement of the rights in precise and unequivocal terms in such contracts will remove much of the subsequent difficulty of interpretation.[84]

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[83] 12 Fletcher, *op. cit.*, 168–170.

[84] The analysis of the state laws made in this article is based on the acts and statutory compilations listed below. The citations in the list are the latest available as of August 1, 1937.

Ala.	Corporation Act (1928), Alabama Code Ann. (Michie, 1928), Sec. 6991.
Alaska	Compiled Laws of Alaska, 1933, Sec. 917.
Ariz.	Arizona Revised Code Ann. (1928), Sec. 4804.
Ark.	Corporation Act (1931), Ch. 225, Sec. 25; Ark. Digest of Statutes (Crawford & Moses Supp. (1931), Sec. 1701y.
Calif.	Corporation Act (1931), Civil Code (Deering Supp. 1933), Sec. 346a.
Colo.	Colorado Statutes Annotated, 1935, Book II, Ch. 41, Sec. 34.
Dist. of Col.	Incorporation Act (1928), D. of C. Code (1929), Title 5, Sec. 278.
Conn.	Connecticut General Statutes (1930), Sec. 3386.
Del.	Revised Code 1935, Sec. 2066, Sub. Sec. 34.
Fla.	Corp. Act (1927), Fla. Compiled General Laws Ann. (1927), Sec. 6549.
Ga.	Code of Georgia (1935), Sec. 22–713.
Hawaii	Hawaii Revised Laws (1935), Sec. 6747.
Idaho	Idaho Code Annotated (1932), Sec. 29–129.
Ill.	Business Corporation Act (1933), Ill. Annotated Statutes (Smith-Hurd) (1935), Ch. 32, Sec. 157–41.
Ind.	General Corporation Act (1929), Ind. Statutes Annotated (Burns, 1933), Sec. 25–211.
Iowa	Iowa Code (1935), Sec. 8378.
Kan.	Kan. Rev. Statutes Ann. (1923), Sec. 17–308.
Ky.	Carroll's Ky. Statutes Annotated (Baldwin, 1936).
La.	Bus. Corporation Act (1928), La. General Statutes (Dart, 1932), Sec. 1106.
Me.	Corp. Act (1930), Me. Revised Statutes (1930), Ch. 56, Sec. 37.
Md.	Md. Code (1932), Md. Annotated Code (Flock 1935 Supp.), Act 23, Sec. 87.
Mass.	Mass. Laws Annotated (1933), Ch. 156, Sec. 37.
Mich.	Gen. Corp. Act (1931), Mich. Acts (1935), No. 194, Sec. 22.
Minn.	Corporation Act (1933), Minn. Statutes (Mason Supp. 1934), Sec. 7492–21.
Miss.	Miss. Code Annotated (1930), Sec. 4149.
Mo.	Mo. Revised Statutes (1929), Sec. 4942
Mont.	Mont. Revised Code, 1935, Sec. 5939.
Neb.	Neb. Compiled Statutes (1929), Sec. 24–302.
Nev.	Nev. Compiled Laws (Hillyer, 1930, & Supp., 1934), Sec. 1625.
N. H.	N. H. Public Laws (1926), Ch. 227, Sec. 15.
N. J.	1930 Supp. to Compiled Laws of N. J., Ch. 47, Sec. 47.
N. M.	N. M. Statutes Annotated (Courtwright, 1929), Sec. 32–156.
N. Y.	Stock Corporation Law (1923), Consolidated Laws of N. Y. (Cahills, 1930), Ch. 60, Sec. 58.
N. C.	N. C. Code Annotated (Michie, 1931), Sec. 1178.
N. D.	Laws of N. D. (1931), Ch. 114, Sec. 4543.
Ohio	Business Corporation Act (1927), Ohio Code Annotated (Throckmorton, 1934), Sec. 8623–38.
Okla.	Okla. Statutes Annotated (1937), title 18, Sec. 106.
Ore.	Oregon Code Annotated (1930), Sec. 25–219.
Pa.	Business Corporation Act (1933), Pa. Statutes Annotated (Purdon, Supp. 1936) Title 15, Sec. 2852–701.
Phil. Is.	Public Laws of Philippine (1928), Act 3518, Sec. 9.
Puerto Rico	Laws of Puerto Rico (1916), Act 24, Sec. 9.
R. I.	R. I. General Laws (1923), Ch. 248, Sec. 38.
S. C.	S. C. Code (Michie, 1932), Sec. 1353.
S. D.	S. D. Compiled Laws (1929), Sec. 8789.
Tenn.	Tenn. Code Annotated (Williams, 1934), Sec. 3737.
Texas	Texas Statutes (Vernon, 1936), Art. 1329.
Utah	Utah Revised Statutes Annotated (1933), Sec. 18–2–17.
Vt.	Vt. Public Laws (1933), Sec. 5850.
Va.	Va. Code (Michie, Supp. 1932), Sec. 3840.
Wash.	Business Corporation Act (1933), Wash. Revised Statutes Annotated (Remington, Supp. 1936), Sec. 3803–24.
W. Va.	W. Va. Code Annotated (Michie, 1932), Sec. 3042.
Wis.	Wis. Statutes (1935), Sec. 182.14.
Wyo.	Wyo. Revised Statutes, Annotated (Courtwright, 1932), Sec. 28–131.
Uniform Bus.	Corporation Act (1928), Sec. 24 (Drafted by Nat'l. Conference of Commissioners on Uniform State Laws).

THIS TREASURY-STOCK QUESTION

HARVEY T. DEINZER

QUESTIONS on treasury stock may be resolved into two fundamental issues, both of which concern the right of a corporation to acquire shares of its own capital stock and which, from that circumstance, are frequently presented without adequate distinction. The resulting treatment is disconcerting to the reader. These questions are: 1. Does a corporation have the legal right to acquire shares of its own capital stock; and 2. Does a corporation have a natural, or moral, right to do so? The latter questions has been buffeted by the winds of the courts in their attempts to arrive at a solution to the former.

Natural right must not be interpreted in the sense of power, or strength. Rather, its meaning must be taken from the ideas of natural right held by people in general. The right of control incident to ownership is a right which civilization has made an inherent part of itself. "It is mine; I can do with it what I will." This theory applied to the funds of a corporation expresses a natural right of a corporation to acquire shares of its own capital stock.

A moral right is closely allied with the idea of injury to others, although in a society, in general, whatever is, is right. An action which is contrary to custom is wrong. But the customs have evolved in a welfare pattern; that is, the mores of a group, upon which judgments of right or wrong are made, have developed upon a background of the influence of customs upon the welfare of the members of the group.

The first question is one of substantive law; the second, of jurisprudence. To the practicing accountant the question of the legal right of a corporation to acquire shares of its own capital stock is more interesting than is the question of the natural or moral right. At the same time, the accountant feels the need to know the reasons for, or to understand the development of, the current substantive law. Primarily to such person this paper is addressed.

THE LEGAL RIGHT

Can a corporation legally acquire shares of its own capital stock? It is understandable that the judges of the state courts during the early years of the nation, having varying degrees of legal education and historic perspective, should have decided this question yes and no. Two contiguous states, whose citizens had very similar social and ancestral backgrounds, took opposing views on this question. In both states the English principles of jurisprudence predominate. And yet with respect to the treasury stock question one state, Ohio, adhered to the principle known as the English rule whereas the neighbor state, Michigan, decided contra.

The English rule is clear and unequivocal. The English courts have held that a corporation does not have the power to purchase shares of its own stock for any purpose unless expressly authorized by charter.[1] The English rule was based upon reason and a strong recognition of the rights of creditors and of the public at large. The judiciaries of Michigan and Ohio, too, displayed a deep consideration for the rights of creditors. Therefore it might have been expected that the supreme courts of these states would concur in their judgment as to the right of a corporation to purchase shares of its own stock.

The fact that the courts of the two states decided the question differently may be partly explained by differences in the education and other qualifications of the judges of the early state courts, as noted earlier. Possibly, too, the current ideal of individualism influenced the judges of the court of one of the states to decide in favor of the right of a

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[1] Trevor v. Whitworth, L.R. 12 App. Cas. 409, decided in the House of Lords in 1887, is the most-cited English case on the subject.

Although the terms "acquisition" and "reissue" of treasury stock are favored by certain leading accountants, still a large measure of reality and common usage support the terms "purchase" and "sale" with respect to treasury stock, especially as denoting a particular type of acquisition or reissue.

corporation, which was then more so than today, a legal crystallization of a group of business men and others, to purchase its own stock. The individualist theory countenanced the performance by a person or a group of persons having a degree of social, business or professional stability and community recognition, of any act which did not directly or appreciably conflict with the rights of other individuals in the community.

It is a matter of great interest to note that the opposed views of the two courts were gradually resolved through exceptions on the one hand and privileges on the other so that the effects of the current rules in the two states, codified at the present time, are strikingly similar. The courts of the two states had recognized the principle of business expediency, which principle, irrespective of the religious, social and political outlooks of the citizens, leads to similar conclusions. A climax in the developmental processes was reached in both states when, only two years apart, the legislatures of these two states enacted as a part of their general corporation codes, provisions which, relating to the right of a corporation to acquire shares of its own capital stock, recognized a common postulate, that the surplus of a corporation has legal and business significance distinctly different from that of capital stock.

The majority of the state courts of this country, including that of Michigan, and the federal courts have decided that a corporation generally has the right to purchase shares of its own capital stock,[2] in contradiction to the English rule. The courts of a minority of the states,[3] including Ohio, followed the English rule. To the so-called majority rule there are restrictions, and to the minority rule, exceptions. These rules will be discussed chiefly as the Michigan and Ohio rules are typical of the majority and of the minority viewpoints, respectively.

THE MICHIGAN RULE

The forerunner to the decision in Michigan came in 1896, when the relator in Detroit Chamber of Commerce v. Secretary of State[4] contended, in arguing that it had the right to increase its issue of capital stock, that the corporation "is authorized to hold property" and that "the capital stock is property." It was not necessary for the court to examine this artificial contention. Subsequently, arguments have been advanced to show that capital stock is property. It has been said that when a corporation buys shares of its own stock, that stock replaces the funds used in the purchase. Notwithstanding the final rule in Ohio, this argument was used by the judge in an early Ohio case.[5]

That the Michigan court in its decisions with respect to the right of a corporation to purchase its own stock would protect creditors' interests was promised in the opinion of the court in American Steel & Wire Company v. Eddy[6] as expressed by Mr. Chief Justice Hooker. The decision in this case was a construction of §7057 of the Compiled Laws of 1897 wherein creditors were given the right of action against stockholders for the recovery of funds which constituted a "withdrawal of capital stock" and a "refunding" thereof to the stockholders. The court said, "When a corporation holds itself out to the world as possessed of a given capital, those who deal with it have a right to

[2] Republic Life Insurance Company v. Swigert, 135 Ill. 150; Douglas v. Daily News Company, 160 Ill. App. 506; West v. Grocery Company, 109 Ia. 488; Schaun v. Brandt. 116 Md. 560; Lindsay v. Cooperative Association, 186 Mass. 371; U. S. Steel Corporation v. Hodge, 64 N. J. Eq. 807; Richards v. Ernst Wiener Company, 207 N.Y. 59; Blalock v. Manufacturing Company, 110 N. C. 99; Sweeney v. Underwriters Company, 29 S. D. 576; San Antonio Hardware Company v. Sanger (Tex.) 151 S. W. 1104; Rogers v. Savings Association, 30 Utah 188; in re Fechheimer Fishel Company, 212 Fed. 357; Burnes v. Burnes, 132 Fed. 485; Lincoln Theaters Corporation v. Fleming, *et al.*, 66 F. (2d) 441; in re Morrisville Concrete Products Company, 6 F. Supp. 465.

[3] Herring v. Ruskin Co-operative Association (Tenn. Ch. App.) 52 S. W. 327; Adams v. Westlake Company, 8 S. D. 119; German Savings Bank v. Wulfekuhler, 19 Kan. 65; Maryland Trust Company v. National Mechanics' Bank, 102 Md. 608; St. Louis Carriage Mfg. Co. v. Hilbert, 24 Mo. App. 338; Currier v. Lebanon Slate Company, 56 N. H. 262; Cartwright v. Dickinson, 88 Tenn. 476.

[4] 109 Mich. 691.

[5] Taylor v. Miami Exporting Company, *et al.*, 60. 176.

[6] 230 Mich. 266. In this case the court expanded the rule in Richardson v. Buhl, 77 Mich. 632 and supported the decision in Lockhart v. Van Alstyne, 31 Mich. 76 with regard to impairing the capital stock by way of a dividend.

the application of such capital to the payment of such debts as it may incur, and it has no authority to impair its capital (stock) by refunding to the stockholders a portion of its capital by way of dividend." This was an interpretation of the statute. And the court saw no difference in the rule if the method of impairment was by dividend or by "formal action to reduce the capital stock." Nor does there seem to be a difference if the method of impairment is by the corporation's purchase of shares of its own capital stock.

Not until 1906 did the Michigan court discuss a part of the question of the right of a corporation to purchase its own stock. The case of Gustin v. Merrill (1906),[7] wherein a mention was made of treasury stock, consisted largely of a determination of fact. And the case of McIntyre v. E. Bement's Sons (1906)[8] decided only the question "whether an *insolvent* corporation could be required to repurchase the stock under agreement previously entered into." The court held that the stockholder who sought to force the corporation to repurchase the stock could not escape the responsibilities of a stockholder in the event of insolvency because the stockholder entered into the repurchase agreement with the implicit understanding that he must accept that risk. Here the creditor's viewpoint is prominent. This case, like the American Steel & Wire Company case, was based on an interpretation of 2 Compiled Laws §7057, relating to the liability of stockholders for payments "withdrawing and refunding the capital stock" to the stockholders before the payment of all debts of the corporation. Mr. Justice Ostrander supports, in the McIntyre case, the statement previously made, that the American Steel & Wire Company decision was readily expansible to include under its principle the purchase by a corporation of shares of its own capital stock. In the words of Mr. Justice Ostrander this decision was in effect "a limitation upon the power of a corporation to acquire by purchase shares of its stock to the detriment of creditors of the corporation."

[7] 144 Mich. 498.

[8] 146 Mich. 74.

At this time the supreme court had made no statement as to the right of a corporation generally to purchase its own stock. It had decided only that a stockholder could not enforce a repurchase agreement when a corporation was insolvent, even though the agreement was made when the corporation was solvent. And it had decided that any stockholder seeking to enforce a repurchase agreement would be required to establish the solvency of the corporation. The solvency of the corporation appears to have been the first, though somewhat vague, test laid down by the Michigan court.

Two years later, in Clark v. E. C. Clark Machine Company (1908)[9] the court advanced another test—good faith. In that case the only complaining creditors whose claims originated prior to the purchase of its stock by the corporation were also stockholders and, since they had been willing parties to the purchase, they were estopped from objecting. The claims of all the other creditors originated after the purchase of the stock. Mr. Chief Justice Grant, in expressing the opinion of the court, said that the purchase by a corporation was ineffective as against creditors, even as against subsequent creditors. Hence the court negatively arrived at the rule, which, at this time, was not definitely stated. The court held the rights of creditors to be of paramount consideration. A corporation could *not* purchase its own stock "to the exclusion of subsequent creditors." "The assessable stock and the assets of a corporation constitute a trust fund, not only for the benefit of existing, but also for future creditors."[10]

The respondent in Lufkin Rule Company v. Secretary of State[11] contended that "a corporation organized under Act No. 323 has no right to purchase its own shares." Unfortunately for the purposes of this article the court did not there find it necessary to determine this question.

The rule was finally stated in Cole v. Cole

[9] 151 Mich. 416.

[10] The judge cited, in support of this decision, American Steel & Wire Company v. Eddy, *supra*, and Peninsular Savings Bank & Stove Polish Company, 105 Mich. 535.

[11] 163 Mich. 30.

Realty Company (1912)[12] wherein, in part, James H. Cole sought specific performance on a contract for the sale of stock. The evidence in this case indicates good faith, a requirement stated earlier. The defendant argued that the corporation was "not organized . . . to deal in its own stock" and complained that such a purchase would be ultra vires. The rule, as stated by Mr. Justice Steere, is as follows: "A corporation acting in good faith, without objection from stockholders and without prejudice to creditors, may purchase shares of its own stock regardless of the purpose for which it was organized, unless forbidden by statute." The court did not attempt to rationalize this rule. Its declaration appeared probable from the character of the earlier negative declarations. "A corporation cannot purchase its stock to the detriment of creditors." "A stockholder cannot enforce a repurchase agreement if the corporation is insolvent." The earlier cases did not require the court to face the question of the right of a corporation in general to purchase its own stock. The court was allowed to declare *a condition* under which the corporation could not purchase or otherwise acquire its own stock. A subsequent case would likely be looked at from the viewpoint of whether or not that condition existed. And a direct declaration of *principle* was derived when none was intended by the earlier type rulings. To say that a corporation cannot purchase its own stock when insolvent is not tantamount to saying that, when solvent, a corporation can purchase its own stock. Yet a principle can easily be accepted from the first statement, and so it was.

No further development[13] of the rule was made until 1927, when, in Barden v. A. Heller Sawdust Company[14] the court again cited the rule in Cole v. Cole Realty Company[15] as authority for holding that a solvent corporation can, in certain circumstances, purchase its own stock, and referred to the earlier case, Clark v. E. C. Clark Machine Company, as subordinate thereto. The Cole Realty Company case was the first Michigan case in which the rule was stated, it is true. But the rule was there stated *without precedent*, and as an illogical corollary to a negative proposition, the proposition that a corporation cannot purchase shares of its own stock to the detriment of creditors.

In the Heller Sawdust Company case the court made the first Michigan statement of the theory, which is now a law, that the existence of surplus is a favorable circumstance to a corporation contemplating the purchase of shares of its own stock. Aside from the greater protection promised to minority stockholders, which appears to be an incidental benefit, this theory is an expression of a legal measure whereby it can be said whether the interests of creditors are jeopardized. It is a rule of evidence, a replacement of the requirement of a determination of fact with a requirement based on the corporation's records. This rule expresses a recognition of the complexity of accounting theory when argued in court. In this case the Michigan court made the first tentative statement in a Michigan case, leading toward the acceptance of this measure of a creditor's protection. The court said, "We are satisfied that the rule that while a corporation may purchase its own stock, *at least when done from surplus*, an insolvent corporation may not do so, and that such transactions are invalid and against public policy, is a safe rule and one which should be followed by this court."

The foregoing statement introduced another viewpoint which, up to that time, had not been expressed by a Michigan court; that is, the right of the public in the question whether a corporation should be allowed to purchase shares of its own stock, was advanced. Insofar as creditors are included in "the public" this statement is not new. But

[12] 169 Mich. 347.

[13] In Miller v. Griswold Building Company (1921), 217 Mich. 192, the court decided against the purchase by a corporation of the stock of one of the incorporators and decided in favor of the creditors. This transaction might have been looked at with a suspicion of fraud.

In Otsego Paper Stock Company v. Brown (1925), 230 Mich. 260, Mr. Justice Sharpe cited Cole v. Cole Realty Company with approval, saying that the solvent corporation could, in this case, "purchase the shares of its own stock hold by the defendants." Good faith was evidenced in this case. The judge emphasized the fact that in this case "the rights of creditors are not involved."

[14] 240 Mich. 549.

[15] Supra. The court also cited Otsego Paper Stock Company v. Brown (1925), 230 Mich. 260.

it is apparent that Mr. Justice Fellows, who delivered the opinion of the court, had made a thorough study of the majority rule, and his decision shows the influence of federal cases among others.

A third development is noted in his use of the idea of fraud, when he said that to permit a corporation to purchase its stock while insolvent "would open the door to all sorts of fraud by the corporate officers and insiders at the expense of creditors and innocent stockholders." The Michigan court had consistently argued on the trust-fund theory for the rights of creditors. A creditor could recover funds improperly distributed because "the capital stock of a corporation is a trust-fund for the benefit of creditors."[16] But in this case the court spoke the theory of fraud as barring an insolvent corporation from purchasing its own capital stock. Here again the influence of federal decisions is noted. The federal courts have rejected the trust-fund reasoning in favor of the argument of fraud.[17] Then, too, the latter theory provides a hearing for minority stockholders.

Mr. Justice Snow, in declaring the opinion of the court in the companion case to the one noted above, First National Bank of Boyne City v. A. Heller Sawdust Company (1927),[18] based his declaration on the trust-fund principle, as explaining why recovery should be had by a creditor from a stockholder, under §9053 (60) Comp. Laws Supp. 1922, Act 84, P. A. 1921. But in Voight v. Remick (1932)[19] wherein Mr. Justice Potter gave the opinion the trust-fund argument was pigion-holed and the questions of fraud and the rights of minority stockholders were discussed. At the time the latter case was decided the Michigan legislature had made certain outstanding changes in that part of the corporation code referring to the power of a corporation to purchase shares of its own stock.

It is interesting to note in passing that in the most recent pertinent Michigan case, Sutton v. Globe Knitting Works (1935),[20] the court held that the preferred-stock relationship is contractual and that a redemption agreement can be enforced. In this case payment could be made without injuring the rights of creditors. The court said that "the undertaking of a corporation to redeem its stock is contractual in nature." The court did not restrict its statement to *preferred* stock Presumably the court intended to include agreements to repurchase common stock.

It appears from the foregoing analysis that the majority rule had been adopted in Michigan quite by accident. The earlier cases involving the question of the right of corporations to purchase their own stock, which came before the Michigan court for decision, did not demand a complete treatment of the question. Negative propositions were advanced on the basis of specific conditions, particularly that of involvency. The absence of this condition in a following case was concomitant with the acceptance of an illogical corollary, expressing the power of a corporation to purchase its own stock when not in conflict with the rights of creditors. This restriction, which involved a determination of fact in each case was essentially confusing. How was the court to determine when the rights of creditors were injured? Then, too, the court recognized the necessity of minimizing the possibility of fraud and the desirability of providing greater protection to minority stockholders. Any or all of these several considerations, as well as a study of federal cases, may have influenced the Michigan court to venture the evidentiary rule that a corporation may purchase shares of its own stock "at least when done from surplus." The codification of this rule will be discussed later.

THE OHIO RULE

The question of the purchase by a corporation of shares of its own capital stock arose in the highest Ohio court long before a similar situation arose for decision in the Michigan supreme court. In 1833 the Ohio

[16] Clark v. E. C. Clark Machine Company, 151 Mich. 416; Brooks v. Buys, 217 Mich. 263.

[17] McDonald v. Williams, 174 U. S. 397; Hollins v. Iron Company, 150 U. S. 371.

[18] 240 Mich. 688. [19] 260 Mich. 198.

[20] 267 Mich. 200. No development had been made in Reith v. University Housing Corporation (1929), 247 Mich. 104. The court there relied upon Barden v. A. Heller Sawdust Company and McIntyre v. E. Bement's Sons, *supra*.

court had before it a suit[21] originated in chancery wherein the complainant's attorney contended, not that the bank in question did not have the right to buy its own stock on the market or to accept the stock as pledges in security for debts, but that fraud existed in the *use* to which the directors put this right.

The defendant corporation in this case had been given its charter by a special act of the legislature, as was common at that time. By the terms of this charter the directors were given very extensive powers. The decision in this case, which allowed the Miami Exporting Company the right to acquire shares of its stock in payment of debts due it, was based on the court's interpretation of the corporation's charter. It appears, however, that Mr. Chief Justice Collett, who stated the opinion, considered it necessary to rationalize the decision. He contended that since the directors, on behalf of the corporation, were at one time active in the market for stock of the Bank of the United States, "why have they not power to buy and sell their own stock?" This defense of the decision presents the consideration that the mind of the judge was somewhat awed by the thought of the Bank of the United States, possibly not realizing that a large part of the stock of that bank was owned by foreign investors and that the bank's structure was political and commercial and not primarily in the best interests of the United States.[22]

In Ohio, too, the concept of capital stock as property early made an appearance in court decisions.[23] Mr. Chief Justice Collett in the Miami Exporting Company case argued naively that the capital stock was not lessened by the corporation's acquisition thereof, since the acquired stock "is there for creditors, as much so as before the transfer; the capital stock is not lessened." This statement has the appearance of an introduction to an anticipated rule that a corporation is allowed to purchase shares of its own capital stock, with certain exceptions.

The path thus prepared to an acceptance of the majority rule in Ohio became overgrown in subsequent years. The Ohio court, years later, when the question again came before it, decided against the right of a corporation to purchase shares of its own capital stock.[24] But the court could not overlook the decision in the Miami Exporting Company case and it declared, "We do not deny that a corporation has power to receive shares of its own stock as security for a debt or other similar purpose." In Coppin v. Greenlees and Ransom Company (1882),[25] Mr. Justice McIlvane summarized the decisions in the two earlier cases denying the right of a corporation to purchase its own stock. This was thirty years before a rule was promulgated in Michigan. In the Coppin case both parties cited numerous authorities for the opposing viewpoints. Both the Miami Exporting Company case and the Building Association case were advanced as authority for the contention that a corporation can, within limits, purchase its stock. The court attempted to rationalize its allowance of the exception, which was actually based upon the earlier court's interpretation of the Exporting Company's charter powers, by saying that "this exception is supposed to rest on a necessity which arises in order to avoid loss."

The arguments advanced by the court in the Coppin case in support of the court's denial of the right of a corporation to purchase shares of its own stock were of several kinds. In a constitutional argument reference was made to article 13 section 3 of the Ohio Constitution of 1851 wherein provision was made for the double liability of stockholders. The court described this provision as

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[21] Taylor v. Miami Exporting Company, *et al*, 6 Ohio 176.

[22] Woodward, *A New American History*, pp. 270, 356, 398. The Literary Guild, Inc., N. Y.

[23] For the adoption of this theory in Michigan see an article "Capital Stock and Surplus—Legal and Accounting Relations" in the ACCOUNTING REVIEW for December 1935.

[24] In 1861 the supreme court of Ohio, in White's Bank of Buffalo v. The Toledo Fire and Marine Insurance Company, 12 O. S. 601, implied the principle that a corporation has only such powers as are expressed or clearly implied in its charter. In State or Ohio v. Oberlin Bldg. & Loan Ass'n (1879), 35 O. S. 258, the court decided that the association could not purchase shares of its own stock under circumstances wherein bad faith was evident.

[25] 38 O. S. 275.

furnishing additional security to creditors.

A few years later the supreme court strengthened the argument presented in the earlier case. In the case of Morgan v. Lewis (1888),[26] the court corroborated the "general and well-recognized principle that a corporation cannot buy its own stock," on the theory of want of power. It reiterated the exception allowing a corporation to take its stock "in satisfaction of a debt due it," and cited the Coppin case. This court, too, attempted to draw a reasonable explanation for the exception and arrived at the same conclusion, that is for the prevention of loss and "not because it is for the satisfaction of a debt." This principle is an extension of the rule.

Several conditions, present in the Morgan case, were relied upon by the court in making its decision. The transaction was executed rather than executory; the transaction had never been directly attacked; all creditors interested in the case were subsequent creditors; the evidence showed good faith.

In Louis De Lacroix, *et al.* v. L. Eid Concrete Steel Company (1909),[27] a lower court summarized the exceptions to the general rule which had to that time been allowed in Ohio. These cases included the Morgan case and the Miami Exporting Company case where the exception had been allowed so that the corporation could "secure itself from loss on a pre-existing debt."[28]

In the De Lacroix case the plaintiff argued that the corporation could purchase its own stock at that time *because* the double liability provision of the constitution was no longer in effect. Against the plaintiff's argument the court interposed section 3266 of the Revised Statutes of Ohio. By this section a corporation is forbidden from using its "stock, means, assets or other property" except to accomplish the purposes for which it was created. And the court said further that a corporation has only such powers as are granted to it by the state and there is no Ohio statute permitting the purchase by a corporation of its own stock.

In 1913 the Nisi Prius court summarized the previous Ohio cases as they relate to the question of the right of a corporation to acquire shares of its own capital stock. This was in State Banking & Trust Company v. The Mattie Mitchell Company, *et al.*[29] The court concluded that the action of the Mattie Mitchell Company in purchasing shares of its own capital stock was not ultra vires. The conclusion was arrived at by treating the corporation's action in this case

[26] 46 O. S. 1.

[27] 19 Ohio Decisions 767.

[28] Additional exceptions were cited as follows: In Columbus, Hocking Valley & Toledo Railway Company v. Burke, 10 Dec. Rep. 136, a common pleas court decided that the corporation had an equitable interest in its own stock; in Sanderson v. Aetna Iron & Nail Company, 34 O. S. 442, the exception was allowed against a stockholder who was precluded from asserting invalidity of the transaction because of his laches; the right was given by a circuit court to the corporation in Cincinnati, Hamilton & Dayton Railroad Company v. Duckworth, 1 Circ. Dec. 618, to take up stock fraudulently issued where otherwise great loss might have resulted; and a repurchase agreement was sanctioned by a common pleas court in Zerkle v. Price, 7 Dec. 465, where the rights of creditors were not concerned, and where the question of guaranty was involved.

[29] 14 N. P. (N. S.) 49. According to this court, the court in the Miami Exporting case based its decision on the charter of the corporation. The judge said that the court in State Bank of Ohio v. Fox, 3 Blatchforth 431, extended the reasoning further than the court's opinion in the Miami Exporting case warranted by declaring that a corporation can take its stock in payment of debts. The judge of the Nisi Prius court gave in historical sequence the cases which he had found dealt with the subject. The earliest after the Miami Exporting case was State of Ohio v. Franklin Bank of Columbus (1840), 10 Ohio 91, wherein the court made "a gratuitous unsupported comment," deciding that a corporation could acquire its stock *only* in payment of a debt. The court there said, p. 98, " . . . it is believed that this is the only legitimate way in which a banking corporation can, as a corporation, become interested in its own stock." The next case noted was Hubbard v. Riley (1878), 7 Ohio Dec. Reprints 473, wherein the court decided against the purchase. Following this case State v. Oberlin Building Association (1879), 35 O. S. 258, discussed in an earlier footnote. In Choppin v. Greenlees & Ransom Company (1882), 38 O. S. 275, the court decided against a corporation's "trafficking in its own stock at pleasure" and made a distinction between an executed and an executory contract. The next case noted was Shaw v. Ohio Edison Illuminating Company (1888), 10 Ohio Decisions Reprints 233. This was also an effort to enforce an executory contract. Also in 1888 was Morgan v. Lewis 46 O. S. 1, discussed earlier. In 1898, in Merchants' National Bank v. Overman Carriage Company, 17 C. C. 253, the circuit court broadened the exception to allow the purchase "only . . . for the purpose of saving it (the corporation) from loss, *and for its own protection*." The judge quoted the Morgan case with approval, particularly with regard to the flexibility of the rule; i.e., allowance of proper exceptions.

as an exception to the general rule that a corporation cannot purchase shares of its own stock. The court followed the development of the rule as outlined on previous pages; it considered that there might be other exceptions to the rule in addition to the acquisition of stock in payment of a debt, and it concluded that the important criterion, in the absence of creditors' interests, was avoidance of loss to the corporation.

Hence the rule had evolved to allow a corporation, in the absence of conflicting creditors' interests, to purchase its own stock for every bona fide corporate purpose. The only restriction was that a corporation could not deal in its own stock "at pleasure." This, then, was a question of motive, the fact of which was to be determined in the individual case. Even a repurchase agreement had been allowed by a lower court where creditors' interests were not concerned.

In 1918 a circuit court in the case of Strauss v. Imperial Motor Car Company,[30] held to the general rule but allowed the purchase in the instant case because creditors' interests were not concerned and to bring about an equitable result as between certain stockholders. The judge restricted the decision to the case.

The latest Ohio case[31] on the subject was decided on the basis of the new Ohio statute allowing a corporation to purchase shares of its own stock under certain conditions. The judge said, "The rule is that the sale of stock to this company is prima facie valid and the burden is upon the company or their successors in title to prove the circumstances giving rise to the invalidity of the transaction." The court cited an earlier circuit court case, Siders v. The Gem City Concrete Company, *et al*,[32] in which opinion it was apparent that the judge was attempting to reconcile Ohio decisions to the majority rule.

The rules in Michigan and Ohio just prior to the recent "surplus provisions" of the corporation codes may be compared as follows: Both the Michigan and the Ohio court considered the interests of creditors paramount. And both states allowed corporations to acquire shares of their own capital stock for purposes of promoting legitimate corporate ends, and in general, for the best interests of the corporation. The distinction was that the Ohio court forbade corporations from dealing in their own stock *at pleasure*, whereas the Michigan court considered the corporation to have such right. Herein the Ohio court recognized the possibilities of fraud and manipulation which would be subversive to the interests of minority stockholders and of the public at large.

THE STATUTES

In 1929 the legislature of the state of Ohio enacted a law which was in effect a codification of the common law. By the terms of §8623–41 of the General Corporation Act a corporation was allowed to purchase shares of its own capital stock under the following conditions: 1. in accordance with redemption tion provisions as authorized by the corporation's charter; 2. to eliminate or to avoid the issuance of fractional shares; 3. for resale to employees; 4. under a repurchase agreement with an employee; 5. for the purpose of resale where the corporation has a right to preemption in respect to outstanding shares; 6. to eliminate the influence of dissenting stockholders at the offer of the dissenting stockholders; and in general "to the extent of the surplus of the aggregate of its assets over the aggregate of its liabilities plus stated capital, when authorized by the affirmative vote of the holders of two-thirds of each class of shares outstanding, . . . or by the board of directors when authorized by the articles, but no such purchase shall be made so as to favor any shareholder over any other."

Additional provisions of this section are as follows: "Whenever a corporation shall acquire in any way any of its shares, they shall be carried on its books as treasury shares until disposed of by sale or reduction of stated capital."

"A corporation shall not purchase its own shares except as provided in this section nor

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[30] 30 Ohio Circuit Decisions (N. S.) 425.

[31] Humphrey v. Koogler (1931), 10 Ohio Law Abstract 42.

[32] (1910), 13 C. C. (N. S.) 481.

where there is reasonable ground for believing that the corporation is unable or, by such purchase, may be rendered unable, to satisfy its obligations or liabilities."

It will be noted that the law provides that acquired shares shall be carried as treasury shares but does not specify how the fact should be displayed in the corporation's published balance sheet.

In 1931 the Michigan legislature enacted a new general corporation act wherein the power[33] of a corporation to purchase shares of its own capital stock was described as follows, "Every corporation . . . shall have power . . . to acquire, purchase, hold, sell and transfer shares of its own capital stock: Provided, That no corporation shall use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of the capital of a corporation . . ."

Section 37, which deals with the redemption of preferred stock, says of the purchase of such shares otherwise than for retirement as provided by the articles, "Such corporation may at any time or from time to time purchase such shares, in the case of shares subject to redemption, at not exceeding the price or prices at which the same may be redeemed but only from surplus." ". . . but no such redemption or purchase shall be made out of capital unless the assets of the corporation remaining after such redemption shall be sufficient to pay any debts of the corporation, the payment of which shall not otherwise have been provided for."

A 1935 amendment to these provisions explained the methods permitted to a corporation for displaying the fact of treasury stock. The alternatives are: 1. Showing the cost as a deduction from surplus. 2. "Classifying the surplus accounts to show the amount of surplus applied to such purchases and which therefore shall not be available for any other purpose."

From opposite points of the compass the courts of the two states have traveled conjoining waterways toward the broad river of unified codes. The two codes in general express the same privilege, that a corporation has the right to purchase shares of its own capital stock "from surplus."

A purchase "from surplus" has frequently been identified with a purchase "which does not impair the capital stock" or legal capital of the corporation. An impairment of the capital stock is said to occur when the aggregate value of the corporate assets at any point of time becomes less than the total of liabilities plus the stated value of the capital stock.[34] Stated in another way, a balance sheet which displays a combined surplus cannot show an impairment of capital stock. Surplus is a residuum, the buffer which absorbs financial shocks as well as regular demands, and the depletion of which announces the approach of a situation where the capital stock may be impaired.

The Ohio code contains a statement that purchases should not "favor any shareholder over any other." This statement typifies a greater regard in recent years for the interests of minority stockholders. Their plea had frequently been entered in the past but largely disregarded in the opinions relating to stock purchases. In recent years, however, the "investing stockholders" have been championed.[35]

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[33] Statutory authority to purchase shares of their own stock had earlier been given to Michigan corporations. The privilege was stated as complementary to the allowance to acquire shares of stock in other corporations. Section 8 of article 9968, Act 84, Public Acts of 1921, reads, "Subject to the limitations of the laws of this state and of the United States with respect to monopolies and illegal restraints of trade, any corporation organized for pecuniary profit, or organized on a stock share or non-stock basis not for pecuniary profit, shall have power in furtherance of the objects of its existence, to purchase and hold shares of stock or memberships of its own or other corporations organized under the laws of this or any other state."

It is strange that published arguments directed against the allowance to a corporation of the privilege of purchasing shares of its own stock, on the ground of the potentiality of manipulation, have not commented on the identity of result accomplished by a controlled corporation's purchase of stock in the parent corporation from selected stockholders desiring to dispose of their holdings.

[34] In re International Radiator Company (1914), 10 Del Ch. 358, 92 Atl. 255; West Penn. Chemical and Mfg. Company v. Prentice (1916), 236 Fed. 891; Haynor v. Engineering Company, 84 Fed. 392; Turner v. Turner Manufacturing Company (1924), 199 N. W. 155; Acker v. Girard Trust Company (1930), 42 F. (2d) 37.

[35] "The Interest of the Investor in Accounting Prin-

THE MORAL RIGHT

The legislatures of Michigan and Ohio have established the legal right of corporations of those states to purchase shares of their own capital stock. What is the conclusion as to the natural, or moral, right of a corporation to acquire shares of its own stock?

The writer is under no delusion that this treatment will fully solve the problem. This question is one well suited to debate. A question of right and wrong can seldom be answered conclusively. The purpose of this section is merely to analyze some of the arguments which have been presented either for or against the moral right of a corporation to acquire shares of its own capital stock,[36] and to indicate the trend toward a solution of this problem. The moral consideration must be divorced from any puritanic idea of the wrong of doing something illegal. For example, as an argument contra to the proposition that a corporation has the moral right to purchase shares of its own capital stock, there has been advanced the analogy between such purchase and the formal reduction of capital stock, with the submerged theme that the corporation in purchasing its own stock is subtly evading the law. Legality per se properly has no bearing on the moral question.

The picture presented by a consideration of the moral problem in this case is one of a city, showing the criss-crossing of the streets. The huge figure of the corporation[37] is shown, pacing forcibly along the streets. Alongside the corporation, the stockholders in control walk on their nimble legs, directing the course of the corporation sometimes along this street, sometimes down the intersecting avenue, in search of Profits. In the crowds of passers-by are other stockholders, creditors, and persons with no direct interest in the corporation or in its productive activities. The stockholders and the creditors who made possible the corporation's search for Profits are to a degree interested in giving the corporation the right-of-way as long as the corporation is going about its search in the not-too-sparsely or thickly-populated sections of the city. A search for Profits in the outlying sections of the city might provide an opportunity for the directing stockholders to appropriate to their individual benefit a share of the Profits accumulated along the way, in breach of their trust to direct the activities of the corporation for the prorata benefit of all the stockholders and for the protection of the creditors. The primary emphasis here is on keeping the corporation in those channels of thoroughfare where its actions may be kept open to observation. The inference from this analogy is that a corporation should be prohibited from acquiring shares of its own stock, because of the possibilities for individual gain to certain stockholders to the detriment of the body of stockholders and of creditors.

The right of the public is symbolized by the right of pedestrians to use the sidewalks and streets for travel. The public, whose activities and resultant wealth made possible the building of the streets, are entitled to use the streets equally with the corporation as their respective needs require.

Returning from the picture to the expression of language, it may be postulated that all interests representing individuals should be granted the right of enterprise. This is an accepted tenet of our economic system. But economists, the courts, and all other thinking

ciples, "by Paul L. Morrison, the ACCOUNTING REVIEW, March 1937; also, Mr. Douglas, Securities & Exchange Commissioner, in talks to brokerage students and to investment bankers, spoke of "the practical usurpation of the rights of the great body of investors," and advocated a "national organization to speak effectively for the voiceless stockholder . . . " *Time Magazine*, Apr. 5, 1937, p. 71.

[36] Certain non-moral arguments may briefly be considered. It has been said, both for and against the allowance of the right, that a corporation may make a profit or suffer a loss in a transaction for the purchase or sale of shares of its own capital stock. This argument appears to be mutually compensating. Surely this argument per se is not valid since the regular operations of the business may also result either in a profit or loss.

That faithful standby to every argument, "Weight O'Authority" has been used in this connection. The surname appears slighted in the statement that the American majority rule stands practically alone in the world. The inference, that the proponents of the majority rule have failed to see what all of the European jurists and other law-makers have seen, seems unwarranted.

[37] The present-day corporation has such a marked degree of business and social reality that this figure is not forced.

persons recognize that certain interests may grow so strong and act so vigorously, or may employ such other modes of activity, that other interests are injured. Restrictions must be interposed in order that, so far as practicable, the conflicting interests may be allowed those values to which they are equitably entitled, *according to the current ethical standards*. This principle is almost universally recognized. The question in the present case is one of degree, of prohibition, or partial restriction.

According to the moral grant of the right of enterprise to every interest representing individuals, a corporation should be allowed to utilize the expedient of purchasing shares of its own stock whenever a bona fide corporate end may thereby be served. Mergers, consolidations, refinancing arrangements may all be facilitated by a corporation's acquisition of its own stock. I call to mind a company which recently exchanged shares of one class of stock for shares of another class together with accrued dividends. The entire exchange arrangement was expedited by the corporation's acquisition of fractional shares resulting from the exchange. In various circumstances a corporation may avoid loss or derive a gain by accepting shares of its issued stock, as by receiving forfeited stock and donated stock, buying out a dissenting stockholder, or accepting its stock in payment of a debt due it. Such benefits may accrue to the corporation in certain instances without resulting in appreciable injury to interests opposed to the corporation.

That it is possible for a clique of stockholders owning the controlling votes to cause the corporation, by dealing in its own stock on the market, to influence the market price of the stock for the intimate advantage of the members of the clique is too widely recognized to require extended expansion. Collateral value is sustained by maintenance of the market price of the stock. A bull influence on the market would provide a greater advantage for short sales by directors having intimate knowledge of a pessimistic earnings outlook for the corporation. Or the group of stockholders might be content merely to dispose of their holdings to the corporation.

Certain opponents of the allowance of the right have advanced arguments which appear designed to free the board of directors from much of the worry and even the normal decisions which, until now, have been considered the prerogatives and responsibilities of the board. It has been at least inferred that the purchase by a corporation of shares of its own stock should be legally restricted because such purchase may endanger the financial position of the corporation and the practice may cause interference with dividend payments to stockholders. This argument is superficial. The use of corporate funds in plant expansion will also deplete current assets to the extent of such use, and who would legally prohibit the directorate from authorizing the expenditure of corporate funds for the erection of new buildings, machinery and other relatively permanent assets?

What is really intended in presenting this argument, I believe, is that directors who are not acting in the best interests of the corporation may authorize the purchase by the corporation of shares of its own capital stock from selected stockholders, who may be identical with the directors. The objection is that dividend payments were interfered with *because* of a self-interested policy adopted by the directors. It is the breach of trust on the part of the directors against which this argument is unconsciously directed.

Creditors, minority stockholders, the general public, all may be harmed by the corporation's activity in the market for its own stock. And a prohibition against the purchase by a corporation of shares of its own capital stock, in or out of the market, would have a salutary effect in the sense of removing a source of temptation to fraud. In the homily of homely Henry, "a man caint cut hisself if he's got no knife." But one might argue that the use of a razor or an axe might accomplish the same result, and that a specific prohibition seems inferior to a general remedy such as is at present provided to the *stockholder* by a suit in equity for a

breach of trust on the part of a director. However, the adequacy of such remedy is seriously questioned, and a certain amount of market activity having manipulative results may be indulged in without providing a cause for action by a stockholder, nor does this general remedy consider the rights of the general public as affected by superficial market activity.[38]

In view of the legitimate advantages to be gained by a corporation in certain circumstances by accepting shares of its issued stock, and since through the broad social benefit of business activity the public at large is also benefited, prohibition of the acquisition by a corporation of its own capital stock does not appear to be a reasonable solution. The avenue should be closed only at that point where extended travel would interfere with the parade of creditors, minority stockholders, and the public. Such a restriction assumes the determination of a standard of interference. The earlier discussion has shown the development of such standards in Michigan and in Ohio to the point where a purchase "in excess of surplus" has been set up as a criterion of interference.

Surplus is a portion of the interest of stockholders in the totality of asset values. It is an interest distinct from the interest of creditors, and distinguishable from the similar interest of stockholders known variously as capital stock, stated capital, or legal capital.

The subject of the myth of creditors' protection has generally been stated as the capital of the corporation, meaning thereby the capital stock. This amount is not fixed for any one corporation. It is on a sliding scale. The measure may go up aside from the possibility of additional equity investment, by a transfer from a surplus account and it may go down by a formal reduction and a transfer of the amount of the reduction to a capital surplus account. Hence the so-called "fund" of protection is a variable. It appears, therefore, that the courts have been interested not in maintaining a particular amount of capital stock for a corporation but rather that the creditors should have constructive notice of all changes in the capital stock of a corporation. And on the theory that an existent creditor at the time of a reduction of capital stock will not be affected by the reduction, creditors are not harmed, in the opinion of the courts, by changes in the capital stock of a corporation because they have constructive notice, through public records, of such change. The courts in allowing purchases by a corporation of shares of its own capital stock "from surplus" have been careful always to protect the interest of *creditors*, the recognition of the rights of "investing stockholders" having been secondary, and an advance in social development. The courts have interpreted the statutes of Delaware[39] as codifications of the common law, wherein, under the majority rule, a purchase "from surplus" was permissable and surplus was defined as the difference between total asset values and liabilities plus legal, or stated, capital. Hence surplus of any nature may serve as a basis for stock purchases. Capital surplus and surplus from revaluation of assets are equally effective with earned surplus for this purpose.

A judgment of the propriety of this use must rest on a determination of the motives of the board of directors and the extent to which creditors' interests and the interests of the investing stockholders and of the public are affected. When the harsh sounds of fraud have been silenced, the cadence of corporate activity follows a tone arrangement accepted by society as harmonious. Dissonances may be heard, as the stockholders' interests conflict with the interests of creditors or of the general public. Unless these dissonances are resolved into accepted tones, the discords are brought to the ears of the courts. The courts have fixed the test of injury to creditors as the impairment of legal capital. An act of the corporation which would impair the legal capital would take on the cacophonous sounds of fraud.

From the foregoing analysis it is apparent

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[38] The term "public" can include a large body of investors who look at their stock as having objective value rather than being a proportionate equity in a corporate enterprise.

[39] See footnote 35.

that the restriction against impairment of capital stock, while it is coextensive with actions free from fraud, does, at the same time, rest on the hypothesis that capital surplus and surplus from revaluation of assets are proper bases for stock purchases. The courts' extension of the definition of "surplus" to include the two classes of surplus just mentioned can only be explained on the ground that, in the judgment of the courts, purchases by a corporation of its own capital stock "from capital surplus and from revaluation surplus," are proper actions. So much to focus the argument.

The inclusion of revaluation surplus in the standard is not defensible. It is evident that revaluation surplus merely expresses an adjustment of or to the market basis with respect to the value of fixed assets.[40]

The consideration of capital surplus as a measure results in a different conclusion. Funds contributed by stockholders for the purpose of enabling the corporation to carry out the economic purpose for which it was formed are in the first instance clearly distinguishable, and the stockholders' interest in these particular funds may be designated capital stock, or the interest may be classified as capital stock and capital surplus. It may be assumed that the incorporators intend to carry on a normal scale of operations with stockholders' capital and to depend on borrowed capital for handling seasonal increases in the volume of business. Hence the contributed capital is invested in plant, equipment, etc., and a portion of the contributed capital is retained to provide fixed working capital.

Successful business operations will result in an influx of current assets in excess of current-asset income-costs plus costs not affecting working capital, such as depreciation of buildings and machinery and amortization of leaseholds. This excess for a period is the measure of the success of the business, and at the close of a period of measurement is called by the undistributed cumulative-measure name, earned surplus. The current-asset influx which is balanced by the costs not affecting working capital is a transmutation of fixed capital, and it is the accounting for this transmutation which supports the conclusion that liquid funds may be considered as representing capital stock and capital surplus.

It has been recognized that the allowance-for-depreciation account of an old established firm tends to approximate in amount 50% of the investment in depreciable assets. This condition approximates the situation outlined in Accountants' Handbook[41] where trucks are replaced yearly without changes in prices and where the life of each unit equals the total number of units. A corporation when it has reached the stage of normal expansion has, under a straight-line depreciation policy, if operations have been consistently successful, recovered approximately 50% of its plant investment, and this portion of the investment will not be needed for future replacement of fixed capital. Hence funds originally representing paid-in capital have been permanently recovered.

The application of classes of interest to groups of assets has no real legal or business basis. The directors have control of all corporate funds and other assets. Because of the difficulty of matching assets and equities in any but the most simple instance, and because of the unreality of such application, the directorate is allowed a wide range of discretion in its judgment as to the effect of corporate financial action upon the varieties of net worth, i.e., capital stock, capital surplus and earned surplus. This fact is conceded in the Tentative Statement of Accounting Principles published in the June 1936 issue of the ACCOUNTING REVIEW by the recommendation therein expressed that the cost of reacquired shares should be treated as an unallocated reduction of capital and surplus until these shares are retired or reissued. In short, the Tentative Statement

[40] Insofar as depreciation charges are based on higher appraised values of fixed assets and these charges are covered by sales, that portion of surplus from revaluation of assets becomes realized in the form of current assets. *Realized* revaluation surplus is merely a subclassification of earned surplus, according to the cost theory as opposed to the current valuation theory.

[41] Pp. 611–612. W. A. Paton, editor, N. Y. The Ronald Press, 1932.

above referred to does not carry a distinction as to source of a specie of net worth, as placing a restriction on the use of funds obtained from that source, to the problem of the acquisition of treasury shares.

Concluding the discussion of the standard of "surplus" as expressing a limit to the acquisition of treasury shares, it appears that from the point of view of liquidity of funds considered, with restrictions, as representing paid-in capital, and from the point of view that the difficulty of matching classes of interest with groups of assets allows the directorate a wide latitude in their recognition of the effect of corporate financial action upon the varieties of stockholders' interest, there is no adequate basis for distinguishing between capital surplus and earned surplus as restrictive measures for the extent of acquisition of treasury shares. According to the same reasoning there is no adequate basis for distinguishing between capital stock and surplus as restrictive measures. The standard set up by the courts has no logical basis in accounting theory. Hence an action by a corporation acquiring shares of its own capital stock in excess of earned or combined earned and paid-in surplus cannot, from this viewpoint, be considered immoral.

The above conclusion turns the argument again to the weighing of the corporate advantages in connection with allowing a corporation to acquire shares of its own stock with the possibility of harm resulting to investing stockholders and to the public from a corporation's activity in its own stock on the market.[42] The present trend toward a solution of this problem concerns the Securities and Exchange Commission. The SEC is now chiefly concerned with assuring that corporate financial action and status shall be truthfully reflected in the published reports of those corporations having securities listed on a stock exchange. However, the Commission is at present also interested in excluding pool action from the stock markets. It may be that the Commission will utilize its granted power to promulgate accounting principles which must be adhered to by the practitioner in the instance of every client desiring to retain the listing privilege. It is conceivable that this power may be extended to prohibit certain types of corporate financial action, especially if such action involves dealings in the corporation's own capital stock. The Commission may act in the capacity of a tribunal with power to grant or disallow to the corporation whose stock is listed the privilege of acquiring its own stock. The procedure would require application by the corporation for the privilege of acquiring shares of its own stock for a bona fide corporate purpose in a specific instance. Under the development suggested above, the general power to acquire shares of its own capital stock would be prohibited to a corporation whose stock is listed. The rules required of the registrant to be followed would be of two kinds, those reflecting theoretically sound accounting principles, and those of a regulatory character, the purpose of which would be to achieve a desired economic and social end. The moral question not only influences judicial thought and governmental action; the mores of our times may be shaped by administrative regulation in the nature of rules of the second class indicated above.

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[42] Assuming the rights of minority stockholders against flagrant private stock transactions to be protected by their right to sue in equity against breach of trust.

REPLACEMENT COST OF GOODS SOLD

GEORGE B. McCOWEN

ONE of the important uses of accounting statistics is to furnish a basis for judgment formation. It is this use which controls the form of accounting statements, the classification of accounts, and the valuations used. Generally speaking, the person with the best information can render the best decision. From this point of view the best accounting would be that which collected and displayed the data in such way that the user would reach the correct decision more frequently than he would if it were collected and displayed in some other manner. If cost prices would cause the user to make the correct decision, cost prices would be the best accounting for that situation. If market prices would cause a better decision, market prices would be the best accounting.

REPLACEMENT COST AND JUDGMENT FORMATION

Having the above thoughts in mind, it is here advocated that the replacement cost of goods sold should be substituted for the cost of goods sold when preparing the profit-and-loss statement of a mercantile or manufacturing concern. The present statement of profit and loss prepared on a cost, or the lower-of-cost-or-market basis would not be abandoned; but the data contained therein should be supplemented by another statement prepared in the same way except that the replacement cost of goods sold would be inserted in place of the cost of goods sold. In a changing market, and when is it not changing, the correct decision will be drawn from a statement of profit and loss showing replacement cost of goods sold, replacement gross profit, and replacement net profit more frequently than it will from the statement prepared on a cost basis.

ILLUSTRATION

The two types of data can best be understood by studying the same facts displayed in both ways. Assume the following balance sheet of Merchant A on January 1, 1936.

Merchandise	$100,000.00	A, Net Worth	$100,000.00

Merchant A has an inventory of 100,000 units of merchandise which cost one dollar each. He is doing business in a rising market and sells the 100,000 units at an average price of $2.00 each, however he is forced to replace his merchandise at $1.50 per unit. His expenses are $90,000 all paid for in cash. His sales are all cash and he pays cash for his new merchandise as long as he can. After that he must charge his merchandise or borrow at his bank.

The profit-and-loss statement on a cost basis is shown below.

Sales		$200,000
Inventory, Jan. 1	$100,000	
Purchases	150,000	
	$250,000	
Inventory, Dec. 31	150,000	
Cost of Goods Sold		100,000
Gross Profit		$100,000
Expenses		90,000
Net Profit		$ 10,000

The balance sheet as of December 31, 1936 is as follows:

Merchandise	$150,000	Accounts Payable or Notes Payable	$ 40,000
		A, Net Worth	110,000

Merchant A may feel reasonably prosperous and decide to expand his business. A profit of 10% on his investment looks good and his current ratio is 3.75 to 1. Had he prepared his profit-and-loss statement using the replacement cost of goods sold it would have appeared as follows:

Sales	$200,000
Replacement cost of goods sold	150,000
Gross Profit	$ 50,000
Expenses	90,000
Net Loss	$ 40,000

The $40,000 net loss is just equal to the increase in accounts payable in his balance

sheet. There has been a $10,000 increase in his net worth but the net worth on the new blance sheet is only 73⅓% of the assets controlled by Merchant A as against an original 100%. And, the assets are the same assets, the same number of units of the same kind of merchandise. His profit-and-loss statement on a cost basis shows a profit of $10,000 and Merchant A would have to pay an income tax. But, at the present price level it would take a gift of $40,000 to restore Merchant A to a 100% ownership of his original 100,000 units of merchandise.

THE DOLLAR CHANGE IN NET WORTH VS. PROFIT

We are accustomed to assume that the statement which explains the dollar change in net worth due to operations also measures the net profit, but they are not the same thing. There can be no profit without an increase in economic power. Merchant A lost economic power. A few more turnovers and he would own only a half or a quarter of his former units of merchandise. Unless he recaptured replacement cost, prosperity would surely ruin him. A merchant should think from goods to goods and not from dollars to dollars. The two statements give the same results only in a static market, but one must operate in a constantly changing market It is idle to argue that Merchant A could now liquidate his business and be $10,000 ahead. Ahead in what? Only in dollars. He could not take his $110,000 and buy another business with 100,000 units of the same merchandise. If the changing price level has affected other goods in a similar manner his $110,000 has less purchasing power than his original $100,000 in any market.

PROFIT ON THE DOWNSWING—COST STATEMENT SHOWING A LOSS

Let us follow Merchant A on the downswing when his profit-and-loss statement shows that he is losing money rapidly. In this case we start him with his new balance sheet as of December 31, 1936. He sells his 100,000 units for $230,000 and replaces his inventory for $100,000. His expenses are still $90,000, His sales are all cash sales and he pays cash for his merchandise and expenses. He also pays off his old debts.

His profit-and-loss statement is as follows:

Sales		$230,000
Inventory 1-1	$150,000	
Purchases	100,000	
	$250,000	
Inventory 12-31	100,000	
Cost of Goods Sold		150,000
Gross Profit		$ 80,000
Expenses		90,000
Net Loss		$ 10,000

His new blance sheet as of December 31, 1937 is:

Merchandise	$100,000	A, Net Worth	$100,000

In other words he lost money but returned to his former financial condition. When his profit-and-loss statement showed a $10,000 profit he lost $40,000 in economic power; when it showed a loss of $10,000 he made the $40,000 back. It is doubtful if correct business decisions can be drawn from such statements.

On a replacement-cost basish is profit-and-loss statement would appear as follows:

Sales	$230,000
Replacement cost of goods sold	100,000
Gross Profit	$130,000
Expenses	90,000
Net Profit	$ 40,000

THE EFFECT OF INCREASING TURNOVERS

Whether the turnover is one time per year or ten times per year will not change the effect of this procedure. Let us follow a concern through three turnovers in one year. In order to show the cumulative effects, statements are made after each turnover. The company starts January 1 with assets as follows: Cash $1000, Accounts Receivable $1000, merchandise $10,000, and other assets of $2000. The net worth is accordingly $14,000. The merchandise is 10,000 units costing $1.00 per unit. The company marks up its merchandise 20% on cost price. Costs increase 10% each turnover. Cash expenses also increase 10% each turnover.

	Sales		*Purchases*		*Expenses*	
	Units	*Price*	*Units*	*Price*	*Cash*	*Depreciation*
First Turnover	10,000	$12,000	10,000	$11,000	$1600	$200
Second Turnover	10,000	13,200	10,000	12,100	1760	200
Third Turnover	10,000	14,520	10,000	13,310	1936	200
		$39,720		$36,410	$5296	$600

Cost Profit	*Profit on Replacement Basis*
$200	Loss.......$800
240	Loss....... 860
284	Loss....... 926
$724	Loss......$2586

PROFIT AND LOSS STATEMENT FOR THE ENTIRE YEAR

Usual Form		
Sales		$39,720
Inventory 1–1	$10,000	
Purchases	36,410	
	$46,410	
Inventory 12–31	13,310	33,100
Gross Profit		$ 6,620
Expenses		5,896
Net Profit		$ 724

Replacement Cost Method	
Sales	$39,720
Replacement cost	36,410
Gross Profit	$ 3,310
Expenses	5,896
Net Loss	$ 2,586

THE EFFECTS ON THE BALANCE SHEETS ARE SHOWN BELOW:

	Cash	Acc. Rec.	Mdse. Inv.	Other Assets	Acc. Pay.	Net Worth	Remarks
Balances to start	1,000	1,000	10,000	2,000	none	14,000	
End of 1st turn	1,200	1,000	11,000	1,800	800	14,200	Increased cash is recaptured depreciation. The increase in accounts payable is the actual loss.
End of 2nd turn	1,400	1,000	12,100	1,600	1,660	14,440	Net worth increased $240.00. Accounts Payable increased $860.00.
End of 3rd turn	1,600	1,000	13,310	1,400	2,586	14,724	Payables increased $926.00. The company still has an excellent current ratio.

The increase in cash is just equal to the recaptured depreciation. The $3,310 increase in inventory value is represented by accounts payable of $2,586 and increased net worth of $724. The accounts have been kept in such manner that the assets values represent the same units throughout and the replacement loss is shown by an increase in accounts payable. In practice there would be considerable shifting in assets and liabilities, but this would not change the fundamental effect.

CAUSAL FACTOR IN BUSINESS CYCLES

If this company paid off its accounts payable by reducing its inventory, it would have to reduce the number of units carried. This would cause a decrease in demand on wholesalers and manufacturers. The decreased demand would cause laborers to be laid off and salaries to be reduced. The result would be a decrease in consumer demand and the beginning of decreasing prices. Decreasing wholesale and manufacturing prices will set into action a sequence of falling prices which, even though profit-and-loss statements show losses, will eventually enable the merchant to again pay off his accounts payable and regain 100% control over his business. There

is sufficient here, psychological and mathematical, to account for some of the strange happenings during a business cycle and be one of the causal factors in such cycles.

When a merchant's profit-and-loss statement shows a good profit he is likely to expand by carrying a larger inventory and extending credit. He will do this until his current ratio is unfavorable. Even though he chooses not to expand he will be forced to by increasing unit prices. The result will be increasing bank loans and open accounts payable. This will continue until the banks and creditors start pressing for payment. At this stage the merchants will have to reduce inventories.

By preparing the profit-and-loss statement on a replacement cost basis this expansion policy will be curbed. The merchant will realize that he must recapture replacement cost plus expenses on the upswing and will increase sales prices more rapidly. If his statement shows a loss his expansion psychology will be curbed. On the downswing he will be willing to decrease prices more rapidly, as he realizes that replacement cost plus expenses is all his sales price need cover to break even.

PRICE INCREASE AND INCREASING VOLUME

We must not overlook the effect of a changing volume, in units, of goods sold on the upswing and downswing of the cycle. On the upswing there will be an increase in units sold which will increase the profit shown by the regular profit-and-loss statements and on the downswing the number of units sold will decrease as will the gross and net profit. An increase in units sold is just another way of saying that the turnover in units has increased. It has already been shown that the number of turnovers will not affect the tendency. If the merchant fails to recapture replacement cost as well as expenses an increased turnover will only speed up the time when his current position demands attention. When economic power is being lost on each turnover the more rapid the turnovers the more rapid is the loss. There is an old joke about the merchant who told his customers that he was selling them goods below cost. One inquired how he could do that and remain in business and he answered that he sold so much that he made it up on volume. This fits the case exactly only the merchant is selling below replacement cost and expenses. His books, on a cost basis, show a profit which increases each period and he thinks he is making a good thing out of his increased volume. Actually, his increased volume is accelerating his technical insolvency.

On the downswing his decrease in volume is really an unfortunate circumstance. It lengthens the time necessary for the merchant to recapture 100% control over his business, but recapture it he will if the downswing lasts long enough. If the decreases in turnovers are no more rapid than the increases were and last for the same number of turns and expenses decrease in a manner compensating their former upswing, the merchant will return to his former financial position in the same number of turns.

Such a delicate balancing of upswing against downswing is not likely to exist. Some may be forced into insolvency and lose out before the downswing starts; certain fixed expenses contracted for when the merchant felt prosperous will not reduce so rapidly, new competitors will tend to undersell him on the way down, and the decrease in prices are usually more rapid than the increase so that he will not get in as many turnovers on the downswing. Even so, he will get in a much better position. If he has extended much credit during the prosperity period the increased purchasing power of the proceeds of these collections will assist in his recovery.

It should be pointed out that the losses depicted on the upswing in the previous cases of this article—I refer to losses when cost of replacement was used—do not tell the whole loss story. The cash on hand and accounts receivable had less purchasing power. Also, if the fixed assets must be replaced in prosperous times it would take more funds to do so. The profit-and-loss statement could be adjusted for those factors, but they are not the chief causes of his increasing technical insolvency condition.

INVENTORIES AT MARKET

It should be noted that a mere pricing of the final inventory at market price will not produce the correct profit on the profit-and-loss statement on either the upswing or downswing. There is really no connection between the two ideas and they should not be confused. Pricing the inventory at market on the upswing will show greater profit when the statement should show a loss unless replacement cost plus expenses have been recaptured in the sales price.

CASES OF ACTUAL PROFIT ON THE UPSWING

Not every business makes a replacement loss on the upswing. Some concerns will have a gross profit of such size and expenses so low that their profit and loss statement will show a profit large enough to cover replacement costs and expenses. For example the company just studied might have sales for the first period or turnover of $13,000.00, a mark-up of 30% on cost. Its profit-and-loss statement for the first period would be as follows:

Cost Basis		Replacement Basis	
Sales	$13,000	Sales	$13,000
Cost of Sales	10,000	Replacement Cost	11,000
Gross Profit	3,000	Gross Profit	2,000
Expenses	1,800	Expenses	1,800
Net Profit	$ 1,200	Net Profit	$ 200

Its balance sheet would be:

Cash	$ 1,400	Net Worth	$15,200
Acc. Rev.	1,000		
Merchandise	11,000		
Other assets	1,800		
	$15,200		$15,200

This balance sheet shows an increase in net worth of $1,200.00 but the only increase in economic power has been a $200.00 cash increase. The other $200.00 cash increase is recaptured depreciation. The reader will recall that there was no change in the number of units in the merchandise inventory.

REPLACEMENT COST AND INCOME TAXES

The profit and loss statement prepared on a cost of replacement basis will not be popular with the Treasury Department during a period of prosperity. It would be very acceptable—the law permitting—on the downswing. But on the downswing it would not be popular with merchants. If losses could not be offset against profits and the same rates prevailed more taxes would be collected because the swings are greater. Notice the man whose profit-and-loss statements showed a profit of $10,000.00 the first year and a loss of $10,000.00 the second. On a cost of replacement basis it showed as loss of $40,000.00 the first year and a profit of $40,000.00 the second year. Service companies would be unaffected, of course.

THE CALCULATION OF REPLACEMENT COST OF GOODS SOLD WHEN MANY DIFFERENT ARTICLES ARE HANDLED

When every article sold is immediately replaced with another of the same kind and quality, the net purchases and the replacement cost of goods sold will be identical. This is true regardless of price variations. But, when units are not replaced or when some lines are dropped and others added it is necessary to adjust the purchases figure. The easiest way to arrive at the adjustment figure or figures is to work from the inventories at the beginning and end of the accounting period. Each item in both inventories must be considered and the purchase adjustment figured therefor. Eleven different situations are recognizable. They are listed below.

(a) Same number in inventory, no price change.
(b) Same number in inventory, price increase.
(c) Same number in inventory, price decrease.
(d) More in inventory, no price change.
(e) More in inventory, price increase.
(f) More in inventory, price decrease.
(g) Less in inventory, no price change; but present market price may have changed.
(h) Less in inventory, price increase; present market price may differ from prices paid.
(i) Less in inventory, price decrease; present market price may differ from prices paid.

(j) In old inventory, not in the new one.
(k) Not in old inventory, in the new one.

The following illustration shows how the inventory variations should be handled in each of these cases. The commodities are keyed A, B, C, etc. to agree with the eleven cases listed above. It will be noticed that an adjustment must be made for every change in units.

current price level plus $23.00 net reduction in the inventory. A $23.00 investment would return the inventory to its former unit or equivalent unit basis and leave $167.00 for the purchase of additional units of old or new lines of goods. This shows that the actual increase in economic power is $167.00 and not $15.00. Increasing economic power is the very essence of profit.

Items	1930	1931		
	Units cost Amt.	Units cost Amt.	Purchase Adjustment	
			Increase Pur.	Decrease Pur.
Commodity A.....	200@1.00=200	200@1.00=200	No adjustment	
Commodity B.....	100@ .50= 50	100@ .75= 75	No adjustment	
Commodity C.....	300@2.00=600	300@1.50=450	No adjustment	
Commodity D.....	50@ .10= 5	60@ .10= 6		10@ .10= 1.00
Commodity E.....	400@ .25=100	500@ .50=250		100@ .50=50.00
Commodity F.....	600@ .20=120	800@ .10= 80		200@ .10=20.00
			market	
Commodity G.....	40@1.00= 40	20@1.00= 20	20@1.10= 22	
Commodity H.....	80@ .30= 24	60@ .40= 24	20@ .50= 10	
Commodity I.....	150@ .10= 15	100@ .05= 5	50@ .04= 2	
Commodity J.....	700@ .15=105	none	700@ .10= 70	
Commodity K....	none	500@ .02= 10		500@ .02=10.00
Totals.......	1259	1120	104	81.00

Market price should be used to adjust the inventory for goods not replaced. If the line has been discontinued entirely, cost price should be used.

The illustration shows an opening inventory December 31, 1930 of $1,259.00. The inventory December 31, 1931 is $1,120.00. Let us assume an opening balance sheet of inventory $1,259.00 and net worth $1,259.00 and run the following transactions through the accounts—Sales $12,000.00, Collections $12,000.00, Purchases $10,000.00, Payments on Account $10,000.00, Expenses (all cash) $1810.00. The accounts are shown below together with a statement of cost of goods sold prepared on a replacement basis. The cost basis shows a profit of $15.00 but replacement basis shows $167.00 profit. Without knowing the exact number of each article purchased it is impossible to allocate the gross profit to lines in the replacement cost method or any other. It may be pointed out, however, that the $190.00 increase in cash was caused by a profit of $167.00 at the

Cash

1-1 Bal.	none	a/c Pay.	$10,000.00
a/c Rec.	$12,000.00	Expense	1,810.00
12/31 Bal.	$ 190.00		

Merchandise

1-1 Bal.	$1,295.00	To P&L	$1,295.00
New	$1,120.00		

Accounts Receivable

1-1	none		
Sales	$12,000.00	Cash	$12,000.00

Accounts Payable

Cash	$10,000.00	1-1	none
		Pur.	$10,000.00

Net Worth

		1-1 Bal.	$ 1,295.00
		Profit	15.00
		Bal.	1,310.00

Cash Profit and Loss Account

Inventory	$ 1,295.00	Inventory	$ 1,120.00
Purchases	10,000.00	Sales	12,000.00
Expenses	1,810.00		
Profit	15.00		
	$13,120.00		$13,120.00

Replacement Profit and Loss

Sales		$12,000.00
Purchases	$10,000.00	
Add decreased units	104.00	
	10,104.00	
Less increased units	81.00	10,023.00
		1,977.00
Expenses		1,810.00
Profit		$ 167.00

Cash

1-1 Bal.	none		
	$12,000.00		$10,000.00
			1,810.00
12/31 Bal.	$ 190.00		

Merchandise

1-1 Bal.	$ 350.00	P&L	$ 350.00
New Inv.	$ 236.00		

Accounts Receivable

1-1 Bal.	none		
	$12,000.00	Cash	$12,000.00

Accounts Payable

		Bal.	none
	$10,000.00		$10,000.00

Net Worth

		1-1 Bal.	$ 350.00
			76.00

Cost Profit and Loss

Inventory	$ 350.00	Inventory	$ 236.00
Purchases	10,000.00	Sales	12,000.00
Expenses	1,810.00		
Profit	76.00		
	$12,236.00		$12.236.00

Replacement Profit and Loss

Sales		$12,000.00
Purchases	$10,000.00	
Add decreased units	125.00	
	10,125.00	
Less increased units	11.00	10,114.00
		1,886.00
Expenses		1,810.00
Net Profit		$ 76.00

A STATIC MARKET SITUATION

In a static market the cost of goods sold on a cost basis or cost-or-market basis whichever is lower, and on a replacement-cost basis will be the same, regardless of inventory fluctuations. In such situations it is readily recognized that the purchases must be adjusted for inventory variations. In this case one need not consider the variation in units or variations in quality or types of goods handled. Since there has been no change in cost prices, the doller adjustment will agree with any adjustment which considers unit variations. The accompanying illustration shows this agreement in a problem solved both ways. The opening balance sheet is inventory $350.00, net worth $350.00. The purchases, sales, expenses, etc. are the same as in the preceding problem. The inventory sheet has only cases A, D, G, J. and K as they are the only cases without price changes, and in this case cost price is used

Items	1930	1931	1931 Purchases Adjustment	
	Units cost Amt.	Units cost Amt.	Increase	Decrease
Commodity A	200@1.00=200	200@1.00=200	No adjustment	
Commodity D	50@ .10= 5	60@ .10= 6		10@.10=1.00
Commodity G	40@1.00= 40	20@1.00= 20	20@1.00= 20	
Commodity J	700@ .15=105	none	700@.15= 105	
Commodity K	none	500@ .02= 10		500@ .02=10.00
Totals	350	236	125	11.00

for the adjustment in J because cost and market are assumed to be the same.

CHANGES IN QUALITY

When the quality of a product is changed, it is really a different product. The old product is discontinued as in case J and the new product is added as in case K.

ANTICIPATING PROFITS

A possible objection to the use of the replacement cost of goods sold is that profits are anticipated. This disolves in thin air when the cases are examined. On the upswing in prices the replacement-cost method always shows less profit than the cost method. It is the cost method which anticipates profits. The cost method anticipates that future sales will be made at such prices as will enable the merchant to pay for his high priced inventory. Any profit shown above replacement cost profit is based squarely on this assumption. The replacement-cost method takes the stand that present market prices are the only real prices and if they are not recovered there is no profit. In tle case where the merchant lost $26\frac{2}{3}\%$ of his business there is no anticipation. That is a present fact and the transactions which have brought the condition to pass are all history. It was shown that on the downswing the same merchant regained 100% control of his business, retained all of his assets in units, and bettered his financial position \$40,000.00. There is no anticipation there. That, too, is history.

BASE INVENTORY

The replacement cost of goods sold should not be confused with the base-inventory argument presented by some income-tax payers. The base-inventory method involves no adjustments to purchases. The opening inventory would remain the same period after period. Purchases would always be the cost of goods sold.

The replacement-cost method involves an adjustment of purchases where there is a unit change in inventory instead of when there is a price change in inventory, and the opening inventory of each period would be be closing inventory of the last period.

JUDGMENT FORMATION AGAIN

The reason why replacement cost is advocated should be recalled. It is argued that replacement cost will cause the merchant to make the correct decision more frequently than a straight cost basis or the lower of cost or market basis. It is shown that the replacement cost basis measures more accurately the change in economic power—especially in the current section of the balance sheet.

The replacement cost statement is more truly a statement of profit and loss than the statement made on a cost basis. The cost basis statement is an explanation of the dollar change in net worth. This is more a reconciliation than a profit.

Once a statement is accepted that is freed from the double-entry debits and credits it may be adjusted for other factors that cause a change in economic power.

RECENT TENDENCIES IN GERMAN BUSINESS ECONOMICS

A. Schranz

The science of business economics (or as it is called in German, betriebswirtschaftslehre) is looked upon in the German-speaking countries as a particular and largely independent branch of the general science of economics.[1]

From a broad standpoint it has the same objective and content as American business organization and administration. But upon closer examination it is seen to be more theoretical, more pretentious of being an independent, compact science parallel to economics, and more thoroughly permeated throughout with accounting.

STAGES IN THE DEVELOPMENT OF GERMAN BUSINESS ECONOMICS

In its modern phase German business economics is of very recent origin, having begun hardly more than fifteen years ago. From the standpoint of its complete history, however, it must be considered to have had a fairly early origin inasmuch as it first appeared in full bloom during the seventeenth and eighteenth centuries. During that period English and French Mercantilism and Physiocratism were at their height. In place of the ideas associated with those two schools of economic thought, however, there were present on German soil the two main early stages of German business economics—"cameralism" (Kameralism) and what may be translated as the "science of trade" (Handelswissenschaft or Handlungswissenschaft).

As a general system of economy, cameralism was widespread throughout Europe between 1650 and 1850, approximately. The German phase was still present in 1830 (at which time the ideas of Adam Smith were beginning to displace it in the German universities and literature). The cameralists were, for the most part, state and court officials engaged in the management of state enterprises, which resembled in nature private undertakings of the sovereigns. In the days when cameralism was slowly developing, the cameralists were the first to gain experience on the principles of business management. They also wrote about what they learned, among such writers being Schroeder, Gasser, Heeser, Schmalz, Baumstarck, Justi, and Priechberg.

The so-called science of trade was an active force in the creation of commercial enterprises, notably those destined for the export and import trade. Its two leading representatives were Guenther Ludovici (1707–1778) and Johan Michel Leuchs (1763–1863). More or less contemporaneous with cameralism, it endured until about the beginning of the nineteenth century.

After the termination of the cameralism and science-of-trade stages, a period of decline set in, extending from 1804 to 1898, according to German calculation.[2] This stage was characterized by the almost entire cessation of scientific research and by the relegation of commercial investigation and training from the universities to commercial and industrial secondary schools. Compendiums and school primers took the place of the earlier scientific works. Political economy, law and history absorbed the earlier autonomous system of the "science of trade," and apart from a few exceptions there was a return to the school texts of bookkeeping, office work, commercial arithmetic and geography. It is interesting to note

[1] The term "German business economics" is ordinarily looked upon as including the field of business economics in the German-speaking countries, particularly Germany, Austria, and the predominantly German-speaking section of Switzerland. The Austrian and Swiss development has been closely allied to the main stream of development, that in Germany.

[2] In 1804 Leuchs' great manual *System des Kaufmanns* ("Merchant's System") was published; in 1898 the first Handelshochschule (literally, "Commercial high school" but actually more nearly equivalent to a commercial university or university school of business) was founded at Leipzig, after being planned for two hundred years.

that during the period of the great development of German industry and commerce in the last three decades of the past century there was practically no science of business economics. However, in the next stage which may be looked upon as having begun in approximately 1900 and ended in about 1920, this situation improved as a result of the influence of the newly created higher commercial education. The present modern stage may be considered to have begun in 1920 or shortly thereafter.

MODERN GERMAN BUSINESS ECONOMICS

As was indicated above, to provide a business personnel thoroughly grounded in business economics and to create centers for the interchange of ideas and for scientific collaboration on this subject, German commercial universities were established. Their years of origin are as follows:

- Leipzig, 1898
- Cologne, 1901 (converted into a university school of economics in 1920)
- Frankfort-on-Main, 1901 (also converted into a university school of economics in 1920)
- Berlin, 1906
- Mannheim, 1908 (incorporated into the University of Heidelberg in 1933)
- Munich, 1910 (absorbed later by the Munich Polytechnic School)
- Koenigsberg, 1915
- Nuremberg, 1919

These schools were developed from modest beginnings, and in a number of respects they were primitive. Some of the early instructors were not used to scientific work; in the early programs general economics predominated, and the field of "commercial sciences was practically equivalent to the fields of bookkeeping and commercial correspondence in the lower commercial schools. The course of study at first covered two years, but after the world war it was generally extended to three years. There was a substantial deficiency of suitable text books and of technical periodicals.

Before the world war, however, there had appeared a pronounced activity in research and a substantial output of literature—conditions that after the war were prominent in the development of the modern stage of German business economics. For in the 1920's were to be seen research on a portentous scale; dozens of scholars occupied only with scientific work, text books, and monographs; a half-dozen or more periodicals and a well-trained staff of considerable size busied with the theoretical and practical problems of the newly-created "Betriebswirtschaftslehre." The outstanding representatives of the business science of that period were the professors of the aforementioned schools; they wrote all the literature of scientific value and directed all the scientific groups of scholars. Hence, German business economics of the 1920's as in many other cases and periods in Germany, was essentially an academic science.

OTHER FACTORS CONTRIBUTING TOWARD MODERN DEVELOPMENT

The predominating position of the schools and professors in business science was undoubtedly favorable for scientific development; the right men were in the right places. Nevertheless, there existed a great drawback. The path of the rapid development had been so narrow that a certain process of inbreeding had taken place. The abstract, theoretical character of even the most practical trend in this academic science, the one-sidedness in choosing the objects of research, and spiritual sterilization in the circles of the participants signalized the undesirable tendencies of this "scholastic" development.

At the end of the twenties, however, new and creative powers appeared in the movement of German business economics. Among these were the associations of graduates of the above-mentioned schools, the accountants' societies, and the Reichskuratorium fuer Wirtschaftlichkeit (German Empire Institute for Scientific Management), called "R.K.W."

The number of graduates receiving commercial diplomas and doctors' degrees in economics from the above-mentioned commercial universities and the economics faculties of the Universities of Cologne and Frank-

fort were increasing by hundreds from year to year; moreover, they were becoming engaged in commercial, industrial, and banking pursuits and many of them were occupying positions in commercial chambers and other economic bodies. Their confederation, the Verband Deutscher Diplomkaufleute (which may be freely translated as the Association of German Commercial School Graduates), the confederation's organ, *Der praktische Betriebswirt* (The Practical Business Economist) is at the present time as respected as the three periodicals of academic trend. This confederation and its organ have shown a many-sided activity. They have edited several series of technical books, held meetings for discussing actual technical problems, offered prizes and given official judgments with regard to the reform of commercial university teaching, etc. The importance of this confederation is still increasing.

The auditing movement has done much towards modifying the academic character of modern German business science. Since the end of the nineteenth century this movement, represented by jurists and accountants, has aimed at establishing a compulsory control by sworn accountants (known as Wirtschaftspruefer or Treuhaender) of the accounts of joint-stock companies. This movement has undergone an especially rapid development but has been almost always independent of academic direction and has not, in generaly, been in the hands of university professors. Its periodical, now entitled *Wirtschaftspruefer*, discusses the practical problems of the profession; e.g., valuations, making up balance sheets, taxes technical points of control and auditing, and the interests of the profession. This movement's leading association, now known as the Institut der Wirtschaftspruefer, had a greater share in influencing the reform that in 1931 made the auditing of joint-stock companies compulsory than had the representative of academic science.

Among the forces adapting German business economics to the solving pf practical business problems the German scientific management movement (Betriebsrationalisirung) plays a prominent part. The leading institution of this movement is the Reichskuratorium fuer Wirtschaftlichkeit, which was reestablished in 1925. To the Reichskuratorium now belong a number of formerly independent institutions, such as the Forschungsstelle fuer den Handel (an institute chiefly devoted to investigating by statistical methods the activities and turnovers of different kinds of commercial enterprises), the Deutsches Handwerksinstitut (an institute for promoting the solution of management problems of small industrial enterprises), etc. The Reichskuratorium is a spontaneous labor organization of the leaders and experts of German economic life. Their work belongs generally to the sphere of technical engineering. From the point of view of business economics the unification of the bookkeeping and cost accounting of different branches of business and the business statistical research with regard to commercial enterprises have been remarkable. The number of publications of the R.K.W. on business research has amounted to one hundred in the last ten years.

Parallel with the activity of the Reichskuratorium and somewhat on the same lines as German business economics there exists a "German Taylor Science" (the Betriebswissenschaft). This is an isolated branch of business economics without any independent theory of its own. The Betriebswissenschaft has been cultivated by engineers and technicians who have dealt with the technical problems of production from the factory-manager standpoint. The chief problems discussed are industrial costs, accounting, systems of wages, storing, sales policies of manufacturing establishments, time measures in workshops, labor psychology, etc.

PRINCIPAL QUESTIONS OF MODERN GERMAN BUSINESS ECONOMICS

We can distinguish certain important and characteristic groups of questions that are very much discussed in modern German business economics.

At the end of the last century German business science was much occupied with accounting problems. Accounting and business

science before, and to some extent until shortly after, the world war seemed to represent the same idea in both its narrower and wider senses. For example, the names of German business scientists at the end of the nineteenth century were essentially those of the best writers on bookkeeping and accountancy such as Schaer, Huegli, Kreibig, Ziegler, Berliner, Leitner, and many others. This period was characterized by the predominant position of the excellent *Zeitschrift fuer Buchhaltung* (Journal of Bookkeeping), which ceased to appear in 1923. It was the period of the so-called bookkeeping theories (Buchhaltungstheorien), and the development of bookkeeping practice. These theories, devoting much attention to explanation of the antithesis in the double-entry system, were the most discussed problems in the first years of the twentieth century; they formed the scientific school, preliminary to the subsequent period dealing with the theoretical foundation of business science.

Interest centering around questions of bookkeeping practice in connection with office appliances and bookkeeping machines appeared in Germany, in general, just before the war and lasted till the end of the twenties. This was the last bookkeeping problem to be discussed on a large scale in German business science. In the last ten years hardly any manuals of bookkeeping have been published, all energy and interest being absorbed by the theoretical foundation of business economics.[3]

The decline in accountancy problems during that period was paralleled by the decline in international trade. Before the war the leading German and Austrian writers on international trade, such as Sonndorfer, Schaer, Hellauer, Ottel, and Stern, names internationally respected, dealt with technical questions of export and import. After the great war the spirit of national self-sufficiency got the upper hand and Germany, as well as Austria, became a continental state without any points of support in international trade. The great changes in international trade and in the money market in the twenties had taken place without the active collaboration of Germany. Industrial production became more important than international trade, and this brought about changes in the literature of German business economics.

A theory regarding the special field of business economic science is not new in Germany, although in the cameralist and science-of-trade period business economics was not looked upon as an independent science with strict relations to general economics, as it now is. According to subsequent conceptions predominating in the first two decades of the present century (as expressed, for instance, by Weyermann-Schoenitz), business economics, then known as "private economics" represented that coherent department of economics which deals with the activities of individual enterprises considered by themselves as going concerns conducted for profit, and which, in opposition to social economics in the narrower sense approaches these activities from the point of view of private interests and deals with them separately according to their individual types. The present conception, however, is that business economics represents a part of general economics more or less independent of the latter, but because these two fields are in close connection with one another, development of the one is presumed by development of the other. The controversies that had raged during the first three decades of our century on the question of "independence" between the founders of business economics and the students of general economics have now been settled.

What is the scope of German business economics? Its boundaries are indefinite and within them there exists no systematization having general validity. The outline below is derived from a representative work entitled *Grundriss der Betriebswirtschaftslehre* (Elements of Business Economic Science), compiled by German business scientists during the later twenties.

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[3] Among the very few exceptions are Kalveram's *Buchhaltungslehre* (Bookkeeping Principles), 1936; and Prion's revision, in 1931, of Schaer's old work, *Buchhaltung und Bilanz* (Bookkeeping and the Balance Sheet).

I. General business economics
  1. Valulation as the basis of business economics
  2. Business management
  3. Technique of financing private and public enterprises
  4. Accountancy of private firms and of public utilities
  5. Costing
  6. Business and taxation
II. Special business economics
  A. Management
    7. Large commercial firms and sales management of factories
    8. Banking operations
    9. Works and factories
    10. Public accountancy (accountants' societies and auditing)
  B. Traffic and circulation problems
    11. Technique and development of commerce
    12. Passenger and goods traffic
    13. Commercial correspondence and publicity
    14. Insurance
    15. Credits and collections
    16. Financing

The most striking feature in the development of the twenties was the emphasis placed on factory business problems (Industriebetriebslehre), as contrasted with the former period when commercial undertakings formed the center of scientific research. Among the thirty regular professors of business science in the German universities and commercial universities of that time six were well-known specialists on factory business problems—Beste, Heber, Lehmann, Roessle, Schmalenbach, and Schmidt—and six others also dealt with industrial business research—Findeisen, Grossmann, Geldmacher, Leitner, Mellerovicz, and Penndorf—whereas only two—Kalveram and Obst—represented bank business research. In other business-science circles there existed the same general proportions. The German periodical of business-science bibliography (*Das Betriebswirtschaftliche Schrifttum*) has contained, since 1930, 670 articles on industrial business problems and only 240 dealing with commercial and 230 with banking problems. Moreover, the largest German business lexicon (*Handwoerterbuch der Betriebswirtschaft*) edited by Professor Nicklisch, who is not an adherent of the industrial tendency, has 120 articles dealing with industrial business problems and only 52 on banking. During the twenties, indeed, German business science was of such character that it might have been a theory of managing the great works in Rhinish Westphalia. The R.K.W. at that time existed to promote factory management, although it now has a larger scope. In the nineteen-thirties, however, this tendency has been somewhat paralleled by the strong development of other problems, especially those of commercial and banking management.

The activities of German business science have not been confined to giving help in the business management of individual going concerns, but have been extended to promote and influence the solution of serious legislative problems concerning company-law amendment, inflation, and crisis legislation in Germany. In the first years after the war German economic life was threatened by a tremendous amount of inflation, a condition that in 1925 led to regulation of the revaluation of assets and liabilities in company balance sheets. This act (Goldmarkbilanzverordnung) was suggested and discussed in profound controversies in German business economic literature. Furthermore, the compulsory auditing of limited-liability companies, introduced into Germany in 1931, was partly the result of agitation created by business scientists. The world crisis of 1929–32 caused a great stir among German business scientists (e.g., Mahlberg, Lehmann, Geldmacher, and Schaefer); the false investments and possible ways out of the crisis were discussed in particular, and several remedies were suggested.

German business economics is nowadays a serious department of German economic science. This is evidenced by the fact that, generally speaking, the number of scientists, the number of university chairs, and the number of scientific periodicals in business economics have reached from a quarter to a third of the number pertaining to the whole of economic science. These remarkable forces

have been actively engaged in building up the proud edifice of German business economics. In contra-distinction to the economic sciences, German business economics, as we have already seen, does not deal with the social-economic organization as a whole, but investigates the organization and activities of individual enterprises. In carrying out this task, however, it has become guilty of one-sidedness and as a result it has created a situation typical of German business economics and of the German spirit generally. In stressing the nature of economic activity, it has neglected the human factor. It has concentrated on "going concerns" and on "enterprises," but has not dealt enough with the individual as a psychological problem. This manifests a spirit thoroughly German, in antithesis to the Western European spirit, which emphasizes man as a human being. German business economics has thus become the science of impersonal organizations, of technical proceedings, and of systematic rigidity. It is developing in a mechanical-rational-positive sense, and we can hardly see any genetical individualizing and psychological indications. It represents the world of automatically-marching organisms (marschierende Betriebe) and that of impersonal connections.

PRACTICAL AND THEORETICAL SCHOOLS: NICKLISCH AND SCHMALENBACH

In German business science there exist both theoretical and practical trends. The theoretical trend aims to investigate abstract business life without any practical purpose in view. It only seeks to bring together the phenomena of business economics. The practical trend, however, does not deal with questions of purely theoretical importance. It regards business economics as an applied science for the promotion of business. Both trends have been of great significance in the past, and still are. It is not easy to mark the boundaries of each because they overlap in so many ways. The majority of German writers belong to the group that is primarily concerned with practical ideas.[4]

We shall now briefly contrast the works and personalities of two leading German scientists of the theoretical and practical groups. Nicklisch is one of the leaders of those scientists who deal with theoretical problems; Schmalenbach is the principal writer of the applied-practical tendency.

Henry Nicklisch represents the pure type of abstract German thinking.[5] He has created the most significant philosophical theory on German business economics in his *Betriebswirtschaftslehre*. According to his views the central principles of business economics are not profit, but efficiency, performance, and justice. He believes that the business activity of a single man cannot be in opposition to the community. Nicklisch is also a follower of normative ideas and by his romantic-universalistic conceptions he stands in spiritual affinity with the famous social philosopher Othmar Spann in Vienna. Nicklisch is a supporter of state interference (Lenkung, or direction) and an advocate of Nazi ideas. He has seldom written on practical problems. His works—typical theoretical German products—are less known in non-

[4] The leading representatives of the theoretical trend are H. Nicklisch, Fr. Schaer, Weyermann-Schoenitz, W. Rieger, O. Hummel, W. Schuster, C. Sandig, and Schoenpflug. The leading names in the practical movement are E. Schmalenbach, Fr. Leitner, Fr. Schmidt, E. Walb, J. Hellauer, W. Prion, E. Geldmacher, Th. Beste, W. Kalveram, J. Ziegler, and P. Gerstner. Besides these the literature of German business economics has a great number of other well-known writers that are not definite representatives of either movement.

[5] Born in 1876. In 1920–21 he was a professor in the Handelschochschule at Mannheim; since then he has been a professor in the Handelschochschule at Berlin. His chief work is *Allgemeine Kaufmaennische Betriebswirtschaftslehre als Privatwirtschaftslehre des Handels und der Industrie* (General Mercantile Business Economics as Private Economics of Trade and Industry). This book ran to seven editions. Two of these, the sixth in 1922, entitled *Wirtschaftliche Betriebslehre* (Economic Management Doctrines), and the seventh in 1929–32 entitled *Die Betriebswirtschaft* (Business Economics) were thoroughly rewritten. His other works are *Der Weg aufwaerts! Organization* (The Road Upward—Organization!), 1920–22; *Grundfragen der Betriebswirtschaft* (Fundamental Questions of Business Economics), 1928; *Neue deutsche Wirtschaftsfuehrung* (New German Economic Guidance), 1933; and *Die Lenkung der Wirtschaft* (The Direction of Economics), 1935. He is editor of the academic, theoretical monthly review *Zeitschrift fuer Handelswissenschaft und Handelspraxis* (Journal of Commercial Science and Commercial Practice), which since 1929 has been entitled *Die Betriebswirtschaft* (Business Economics).

German speaking countries, though in his fatherland he exerts a great influence on the systematization of business theories. He has, perhaps, the greatest capacity for synthetic thinking in German business science. He is one of the fathers of the unique and separate science Betriebswirtschaftslehre.

Eugen Schmalenbach is a practical thinker with great analytical capacity.[6] His literary activity leads to a field quite different from that of Nicklisch. The constant sphere of interest in his literary work is research into the internal life of factory enterprises. His chief subjects are costing, profits, and financing. Schmalenbach has created the "dynamic balance-sheet theory," which in lieu of emphasizing the value of the assets when preparing the balance sheet, as had been done under the former static balance-sheet concept generally employed, emphasizes the exact ascertainment of the profit of the balance-sheet period. In his *Kontenrahmen* he gives a very delicate instrument for factory business enterprises in the organization of bookkeeping systems, costing, and monthly financial statements. This led to the unification movement of branch business enterprises carried on in the R.K.W. He is the greatest German specialist in factory business problems, which owing to his activity, have become the most scientifically complete branch in German business literature. Schmalenbach may be said to be the greatest practical business expert in the circle of the business science. His influence is important not only in the German-speaking countries, but in foreign ones also.

GERMAN BUSINESS ECONOMICS UNDER NAZI INFLUENCE

Nazi ideas have influenced every department of German science. This influence has both a negative and a positive side. The negative side represents the departure and the silencing of scientists with views opposed to Nazi ideas. The positive side includes the intensive cultivation of fields and problems in line with Nazi conceptions. Both are represented in German business science.

The abolition of the elements among business scientists not corresponding with Nazi conceptions has not been carried out to a very great extent. For example, only about 10% of the professors in business science have left their chairs. The greatest loss was no doubt the resignation of Schmalenbach, but his direction and spirit still remain well represented in the University of Cologne. There is no part of business economics which is "forbidden" by the new political ideas now ruling in Germany.

In any exposition of the positive influence of Nazi ideas on German business economics it should be mentioned that such ideas first appeared in a theoretical direction and belonged largely to the sphere of philosophy, ethics, and political science. Their effect on business science is hostile to the individualistic economic trend, for they favor an idealistic-universalistic system. They do not recognize the rational-logical character of business economics; on the contrary, they tend to take a mythical, superintellectual standpoint.

Nazi interest centers around the chief (Fuehrer) of the private enterprise. He is active in the capacity of owner or director and represents the national (voelkisch) spirit. He is an autocrat with few responsibilities. His supreme aim and duty are not to obtain the greatest possible profit, but to promote the economic equilibrium of the country by harmonizing production and consumption. The single individual is subject to the primary will of the nation in the respect and the general *leitmotif* in business life is ethical education towards this end.

It would be very untimely to discuss in detail the influence of Nazi ideas on German business economics. We can only state that every kind of problem formerly dealt

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[6] Born in 1873. He was professor at the University of Cologne from 1919 to 1933, and first editor of the famous practical monthly review *Zeitschrift fuer handelswissenschaftliche Forschung* (Journal of Business Economic Inquiry). His representative works are *Grundlagen der Selbstkostenrechnung* (Fundamentals of Cost Computation and Price Policy), *Grundlagen dynamischer Bilanzlehre* (Fundamentals of Dynamic Balance Sheets), *Finanzierungen* (Financings), *Der Kontenrahmen* (The Account Framework), *Kapital* (Capital), *Kredit und Zins* (Credit and Interest).

with on German territory is still under discussion. In some points research seems to have increased. Instead of the cultivation of large-scale industry, however, a reversion towards medium and small enterprises has taken place. The overseas questions of international trade are much discussed and occasionally war economics. Price control by commissaries and authorities is also a typical chapter in modern discussions. These subjects are, of course, not always brought forth in connection with Nazi ideas alone.

In conclusion, we may notice a generally quiet tendency in the literature of recent times. At the beginning of the Nazi hegemony German business science closed its magnificent epoch of the creation of great fundamental theories. The German eagle does not now fly so swiftly or so high; it takes a lower flight. But we may rest assured that it will ever seek new fields and fresh prey—in the pursuit of science.

PRESENTATION OF BOND DISCOUNT

William A. Paton

Included in the "Tentative Statement of Accounting Principles" offered by the American Accounting Association in the Accounting Review of June, 1936, was the recommendation that unaccumulated bond discount be reported in the corporate balance sheet as a contra to the face or maturity amount of the outstanding obligation rather than as an asset. The purpose of advancing this specific suggestion in a statement of general principles was to call attention to a practice, well-nigh universal among professional accountants, which is neither in accord with the clear reasoning which is supposed to characterize accounting nor supported by the "considerations of expediency" so cherished by those who feel it necessary to offer some excuse for deviations from logical procedure. The members of the Executive Committee of the Association felt, in other words, that here was a particular point at which accepted presentation is definitely out of line with sound principle and where correction would be entirely feasible—aside from the problem of inducing the typical accountant to change his ways.

The recommendation, it should be understood, does not involve any new doctrine or approach. It represents merely the application to financial statements of the interpretation of bond discount long a commonplace in financial circles and among the actuaries, and set forth with the utmost clarity by Sprague in his "Accountancy of Investment." From time to time, moreover, the proposed method of reporting discount has been supported in the accounting journals, with nothing appearing by way of a defense for the conventional treatment.[1]

In view of the traditional unwillingness of the accountant to acknowledge error it is not surprising that this suggestion of the Association has drawn some fire; indeed it was hoped that this would be the case. In the *Journal of Accountancy* for April, 1937, Colonel Montgomery aims a couple of shots at the Committee's proposal. The Colonel's first charge—to the effect that the recommendation that discount be reported as a contra-liability item grows out of the traditional penchant for balancing—appears to backfire, as there is good reason for believing that the early conception of the balance sheet as a final statement of ledger balances presented in an equilibrium of debits and credits in account form is in part responsible for the practice of including bond discount—and other elements logically modifying liability balances—on the "asset side." His second shot simmers down to general opposition to a proposal calling for a change in settled practice, regardless of the merits, and here he is obviously using blank cartridge. The only suggestion of argument offered is found in the claim—not well supported—that the true liability for accounting pur-

[1] The present writer, for example, discussed the question in an article in the *Journal of Accountancy*, issue of May, 1920.

poses is always the face or stated amount of the obligation.

In the May and August issues of the *Journal* Mr. Carman replies to the Colonel's objections and supports the Committee's recommendation in such effective fashion as to make further discussion of the question hardly necessary. The Editor of the Review however, has asked me to present a statement on behalf of the Committee, and I shall accordingly endeavor to outline again the case for the position taken in the "Tentative Statement."

There are two related questions involved. First, what is the significance of discount—the difference between the amount actually loaned or contributed by the bondholder or other type of creditor and the face or stated amount of the obligation? Second, what is the most appropriate and effective way of reporting a liability to which discount attaches in the periodic statement of financial position? In attempting to answer these questions it is necessary, as a preliminary step, to consider the character and accounting significance of liabilities in general. The impression that a liability is a fixed, unvarying amount throughout the life of the contract, which seems to be lodged in the minds of many accountants, is entirely unwarranted by the legal and financial conditions obtaining and is regularly denied by the accountant's own procedures. The plain fact is that the effective amount of a liability changes systematically throughout the term of the indebtedness. Thus if a company borrows $100,000 for one year at 6% the true amount of the obligation at the outset is $100,000. One day later the liability is $100,016.44, the increase representing the interest accrued. Each day the liability increases by a like amount and at the due date the creditor's claim stands at the full maturity value, including interest, of $106,000. And in this situation all accountants would agree that in preparing a balance sheet at any interim point it is necessary to show the liability (under one or more titles) at the amount accrued to date. In other words, that the amount of a liability is subject to restatement (valuation) from day to day in the light of the terms of the contract, explicit or implied, is recognized in the commonplace, routine procedure of accruing interest as the date of maturity approaches.

It may be insisted, then, that a liability is not continuously measured by "face" or par value. The face amount represents the sum due at maturity, exclusive of any explicit interest payable at that date; it may or may not represent the amount of the original consideration. At interim dates it is evident that the liability is not correctly reported if listed at face falue, with no adjustment for accrued interest.

Now consider the case of an obligation which carries no explicit interest, of which examples often arise in the form of short-term paper. The debtor commonly treats the liability on his books and statements as constant throughout the life of the bill or note, and this procedure may be supported as a practical matter on the ground that the amount of discount is small, is not explicitly disclosed by the terms, and is likely to be fully or largely absorbed within a single accounting period. That such treatment is not altogether correct, however, is clear. For example, a concern buying a shipment of goods for which settlement is made by issuing a 60-day draft for $50,000, without explicit interest, is actually buying merchandise with an immediate cash cost, assuming a discount rate of 6%, of approximately $49,500 and is incurring an obligation amounting—at the outset—to the same figure. The ideal initial procedure, therefore, would involve the charging of merchandise with the amount of $49,500 and the setting up of a discount of $500 as an offset to the face amount. Then as the discount accrued it would be chargeable as interest rather than as cost of goods—a distinct improvement in the classification of charges. Moreover, although the ideal procedure need not be urged for the enterprise with occasional liabilities of this type it is of interest to note that in standard banking practice the non-interest bearing receivables corresponding to the payables on the books of various debtors are set up at discounted

value, through the use of an offsetting unearned discounts account. Under these conditions it is folly to insist, even in the case of the short-term liability carrying no explicit interest, that the amount of the obligation remains at a constant figure throughout the life of the contract; the fact is that the effective liability is subject to systematic change from date of issue to date of maturity (although it may not be deemed expedient to reflect this process in the accounts.[2]

Long-term contracts carrying no explicit interest are somewhat unusual. Nevertheless consideration of the type of liability arising under such a contract is decidedly helpful as a means of focusing attention upon the inherent unreasonableness of the view that liabilities must be reported continuously at face or maturity value. A security which does not provide an interest annuity is worth simply the present value of the sum due at maturity, and the interest realized by the investor and paid by the issuer is all in the form of discount—the excess of maturity value over the amount received. The United States Government, for example, is issuing "Savings Bonds" with no interest annuity attached. These bonds are offered in maturity denominations ranging from $25 to $1,000 and are payable in ten years. The issue price in each case is three-quarters of the maturity value. Thus the price of a bond of the $1,000 denomination is $750, and the interest paid by the Government in a lump sum when the bond matures is $250. In this situation it would be manifestly absurd to contend that the liability to be reported remains fixed throughout the life of the bond at $1,000. Actually the original liability is $750 and the maturity liability is $1,000, and at any interim date the net amount to be reported lies somewhere between these two figures. If it be insisted that the initial liability is $1,000, although only $750 is received by the borrower, then it is patent that a deficit of $250 has mysteriously arisen, despite the fact that the transaction has been entered into voluntarily, with no thought of loss, by both parties. Granting that the present Government is a past master in the art of creating deficits it would be quite unfair to treat the discount on the "baby bonds," which will accure over a period of years, as an immediate loss to the borrower. The correct interpretation, obviously, is that which views the unaccumulated discount as an offset to the face or maturity amount of the obligation.

The typical bond contract, as has often been pointed out, is a combination of the non-interest bearing instrument and an annuity represented by the series of interest payments, and the issue price—on a cash or equivalent basis—is the initial market value of the security. If the stated interest rate is the market rate, in the light of the various conditions present, the discounted value of the face amount payable at maturity plus the discounted value of the series of interest payments will equal the amount of par or face. (Even here it should be insisted that although face coincides with the issue price, it is the issue price and not the lump sum due at maturity that represents the initial value of the bond.) On the other hand if the rate of interest expressed by the annuity offered is less than the market rate the familiar case of discount arises. The discount is measured by the difference between the amount of the issue price (as represented by the contribution of the first bona fide holder) and the face amount payable at maturity.

The problem at issue is the nature and treatment of such discount, with particular reference to the books and statements of the borrower. As has been indicated by the approach adopted here this problem resolves itself into the question: What is the true liability of the issuing corporation, at the outset and during the life of the security?

The possible measures of the original liability are:

1. Total amount payable, interest and principal, under the terms of the contract.
2. Amount due at maturity.
3. Actual amount received or invested.

Assume, for example, that a company issues a twenty-year bond, agreeing to pay the investor $25 every six months through the life

[2] For a fuller statement see the writer's "Special Applications of Discounting" appearing in the *Journal of Accountancy* for October, 1928.

of the security and $1,000 twenty years from date of issue, and receives therefore $900 in cash. In this case, evidently, the corporation obligates itself to pay a total of $2,000, and in a very real sense the liability assumed is actually this amount. The borrowing enterprise promises to pay the annuity of $25 just as explicitly as it promises to pay the maturity value, and all of the annuity instalments become due and payable in full before the maturity date. At the same time it is equally clear that this total liability is not the true liability to be recognized in the accounts at the date of issue. To set up $2,000 as the initial liability would imply that the borrower were willing to become immediately obligated for $2,000 although receiving only $900, an obviously ridiculous interpretation of an ordinary commercial transaction between two parties who may be assumed to be in good financial standing and equally desirous of reaching an agreement. Such a treatment, further, would be unreasonable in that it would ignore the earning power of the funds received. Indeed the borrower is not justified in entering into such an arrangement unless the amount received for the bond, $900, can be expected to produce a net return of at least $1,100 during the twenty-year period.

Adoption of the second alternative—the usual practice—is likewise seriously objectionable. If the immediately effective liability for accounting purposes is $1,000, the maturity value, it follows that the difference between this amount and the sum received, $100, is either an outright loss or an asset. To hold that the discount is a loss is untenable. The corporation willingly accepts the terms, and sees in the transaction an equitable arrangement in no way involving a dissipation of assets or any form of deficit. It is equally difficult to accept the theory that the discount is an asset. Discount is the *difference* between the money or other property received for the bond and the maturity value; it is not an *addition* to the money or other property. In fact to hold that discount is a true asset is tantamount to insisting that the actual resources or property received must invariably total the face value of the security, regardless of the price at which issued, which denies the existence of discount, the phenomenon under consideration!

The third alternative is the only one which is fully acceptable. The effective liability at the outset is the actual amount received from the investor. This conclusion is obviously reasonable; in a commonplace and supposedly equitable transaction it is to be expected that the immediate obligation incurred by the borrower will be neither more nor less than the amount of money or equivalent obtained. It also leads directly to a sound program of discount accumulation. The liability to begin with is the amount received, $900; the liability at maturity is clearly $1,000; the difference is made up through systematic accumulation of the discount, $100, preferably by adjustment of periodic interest charges through the application of the yield rate implicit in the terms of the loan. At all interim points the liability is the sum of the original obligation and the accumulation to date of that portion of the interest element which is retained until maturity. This treatment involves no padding of assets or charging off of fanciful losses.

It may be objected that the true legal liability is the face or maturity value since this amount becomes due and payable immediately in the event of default. This point may be met in some measure by calling attention to the view, generally accepted, which holds that accounting principles and procedures should be developed primarily from the standpoint of the going concern rather than that of the insolvent or liquidating enterprise. Moreover, settlements in bankruptcy and reorganization are presumably dictated in some degree by considerations of equity, and to ignore a substantial element of unaccumulated discount would be decidedly unfair. Suppose, for example, that shortly after issuing a block of debenture bonds at a discount of ten points the issuing company became insolvent. Is it not clear that in making a settlement the debenture bondholders should be treated differently from creditors whose claims represent contributions of 100 cents on the dollar?

To treat bond discount as a dubious asset is bad, but to label the item "prepaid interest" is worse. Interest is a charge for the use of funds as time elapses and in a strict sense cannot be "prepaid," as any advance by the borrower would merely serve to reduce the amount of the loan. And in the case of a loan effected at a discount the borrower actually makes no advance or prepayment in any form. Far from being *prepaid* interest the discount represents *unpaid* or future interest, interest which will not be paid until the date of maturity. At the outset the discount measures the difference between the proceeds of the loan and a stated sum due at a future date. As time passes this difference accrues as an element of the true interest and requires periodic recognition as such. There is no vestige of prepayment involved.

In this connection one may well ask for an explanation of certain items appearing in the model balance sheet shown in the publication dealing with the "Examination of Financial Statements by Independent Public Accountants" prepared and issued by the American Institute of Accountants. Under "Deferred Charges" the following headings are juxtaposed:

Prepaid expenses, interest, insurance, taxes, etc.

Bond discount

Aside from the question of the propriety of presenting genuine short-term prepayments as deferred charges following plant and intangible assets it seems to be rather naïve to provide for "prepaid interest" and bond discount—the principal case of so-called prepayment—as separate elements.

Incidental support for the view that bond discount should be reported in the liability section of the balance sheet is found in the accepted treatment of bond premium. Although premium has sometimes been improperly referred to as "deferred income" accountants in general have recognized that where a bond is issued at a price in excess of par the total price represents the market valuation of the interest annuity and the sum due at maturity, and the item of premium attaches to the equity of the bondholder rather than to that of the stockholder.

Another check on the propriety of the view that discount is a contra-liability item is afforded by consideration of the procedure regularly followed on the bondholder's books. To the investor, for example, who pays $900 for a twenty-year bond with a maturity value of $1,000, the amount of the initial asset is clearly only $900, and this is the amount, all would agree, which should appear in his records. If, then, the actual asset of the holder at the outset is but $900 how can we insist that the effective liability to the other party to the contract, the issuer, stands at $1,000?

"But," the objector says, "even if I admit that the line of interpretation you have suggested is thoroughly sound why change a settled procedure which meets the essential requirements of the situation and at the worst does no harm. The amount of the stockholder's equity—the most important element of the balance sheet—is not affected by the location of discount, nor is the systematic accumulation of discount through periodic charges to income in any way hampered by the practice of reporting discount on the asset side. In other words, is it not a case of 'much ado about nothing.' "

The answer to this, in the first place, is that the development of clear thinking on the part of the accountant is of basic importance and that the use of questionable procedures and methods of presentation—at any point—tends to encourage the uncritical attitude and careless reasoning which are responsible for serious blunders. In the second place, as Mr. Carman emphasized in his replies to Colonel Montgomery, the treatment of discount as an offset to maturity value on the liability side is actually preferable as a matter of reporting. If the discount is reported under assets the conditions are not clearly shown. The method recommended by the Committee presents all the data in clear-cut fashion, thus:

First Mortgage 5s, Payable December 31, 1957		
Amount Payable at Maturity	**$1,000,000**	
Unaccumulated Discount	**50,000**	
Net Book Value		**$950,000**

In the third place it may be noted that the practice of carrying bond discount as an asset has led in many instances to the bad habit of combining with discount the genuine costs of raising capital—payments actually made for financial services which are just as essential and as appropriately included in the pool of costs incurred which it is hoped will be recouped out of future revenues as are charges covering the services of the bricklayer or the carpenter. Granting that in involved situations there may be some difficulty in drawing the line, it is clear that every reasonable effort should be made to distinguish the portion of maturity value not paid in by the bondholder from charges representing the utilization in particular directions of funds actually contributed.

Why should the correct method, finally, be thrown on the defensive? The proposed presentation involves no technical difficulties; it gives all the data that are shown by the conventional procedure. Then why adhere to a treatment which has always been recognized as questionable and has forced the accountant to think of the asset side of the balance sheet as covering "assets, etc."? Practical difficulties of a serious character often stand in the way of desirable developments but here we find nothing except "I don't like it." Time-tried devices should never be lightly discarded, but how little would be our progress in any direction if mere length of use and wide acceptance were permitted to outweigh genuine merit!

The particular point under discussion is not a matter of great moment in itself, but the issue of straight thinking and sound classification and procedure versus adherence to customary practice has real significance.

INTRODUCTION OF DOUBLE-ENTRY BOOKKEEPING INTO JAPAN

Shinshichiro Shimme

There are various methods of bookkeeping prevelant in the world, each requiring a specific technique. For instance, there are Italian, English, German, French, and American bookkeeping methods in accordance with conditions peculiar to the country. Both the name and the content are different in each country; however, it is quite evident that modern bookkeeping, no matter where and how it is used, originated with the Italian "method."

Italian bookkeeping is very old, but it appeared in systematized form for the first time in Paciolo's "Summa de Arithmetica, Geometria, Proportioni et Proportionalita," published in the year 1494. It is true that banks and commercial firms in Florence, Genoa, and Venice, are said to have adopted something like the double-entry bookkeeping system in the middle ages, but whatever system existed was handed down among the specialists as a business secret and was not known by the public. When Paciolo's book appeared, it was immediately carried over not only to the various continental countries which had commercial relations with Italy, but also to England and subsequently to America; and it was translated into various languages as soon as modern nations adopted the principles of political economy set forth in the famous "Wealth of Nations" of Adam Smith. It may even be said that this book of Paciolo's has been regarded as the holy scripture of modern bookkeeping.

Originally this book was not published as a bookkeeping text, but as a text book of mathematics, as its name implies; it was intended to summarize existing knowledge of mathematics, such as arithmetic, geometry, and proportion. The division dealing with bookkeeping, Part I, Section 9, General Treatise, Chapter 11, was entitled "Tractus particularis de computis et scripturis." This little chapter, the foundation of our double-entry system of today, was translated into the Japanese language by Professor Yasu-

taro Hirai, of the Kobe University of Commerce, in 1920, and published in Vol. 4 of "Kaikeigaku Ronso" (Journal of Accountancy), Kobe, Japan; but it is common among the students of bookkeeping and accounting in Japan to grasp the fundamental conceptions thereof through English or American books.

INTRODUCTION OF DOUBLE-ENTRY BOOKKEEPING TECHNIQUE INTO JAPAN

In reviewing the introduction of double-entry bookkeeping into Japan, it will be best to differentiate between the introduction of the technique of double-entry bookkeeping and the importation of literature on bookkeeping. The introduction of technique will be dealt with first.

The introduction of the technique of double-entry bookkeeping may be said to have occurred in the latter part of the Tokugawa Shogunate. For in January of the 2d year of Genji (1865) the French minister plenipotentiary and French naval engineers devised, together with Suwa Inabanokami (whose title in the Shogunate was somewhat like that of undersecretary) and Oguri Kozukenosuke, chief cashier, the original organization plan of the Yokosuka Steel Works, in the third section of which were the following rules: "All the books of account shall be kept in both the Japanese and French languages by the Japanese and French chief officers; the warehouse stock books shall be kept in Japanese by a Japanese chief officer, and the factory books shall be kept by Japanese clerks under the direction of the French chief." By this rule it can be inferred that the introduction of the technique of European bookkeeping took place more than seventy years ago. The chief accountant of the Yokosuka Steel Works was a French naval accountant. Using French methods he supervised all the general and factory systems of the works from October 1st in the 1st year of Keio (1865). So far as is known, this was the first instance of the introduction and utilization of the European accounting method.

In this case the new system, of course, was first used in connection with entries relating to the construction of the factory and to the installation of the machinery. But when all the installations had been completed, calculation of the cost to produce the items ordered by outsiders gradually came into existence; here we can see the budding of present-day cost accounting.

All the merchants in Japan in the Tokugawa Era were using single-entry bookkeeping, called "Daifukucho" or "Toozacho," in recording their business transactions. However, the Japanese "Industrial Revolution," which took place during the latter part of the Tokugawa Shogunate and during the Meiji Restoration, indicated the importance of European machinery and equipment, and the industrial system gradually adapted itself to the European mode. Accounting for business transactions had become so complicated that the hereditary Japanese system could hardly do justice to the new business methods, so considerable impetus was given to the introduction of European accounting methods.

The type of European accounting then being introduced was mostly the contemporary French kind as regards the general ledger scheme of accounts, the method of making entries, and the technical treatment of the accounts. For instance, a section in the factory regulations of the Yokosuka Steel Works (published in January of the 5th year of Meiji—1872) states, "The chief interpreter of the accounting department shall study the French accounting systems."

At the time the French naval accountant referred to above arrived as chief accountant of the Yokosuka Steel Works, in October, 1865, accounting in France was relatively well advanced and refined. For Paciolo's book and a book on bookkeeping by Domenico Manzoni, which was published in Venice in 1535, had both been translated into French, and the Italian bookkeeping method had been introduced into France. Moreover, the famous "Code Napoleon," which first recognized the regulation of commercial accounts, was put into effect early in 1807.

This accountant finished his term with the

Yokosuka Steel Works in November of the 3rd year of Meiji (1870), and his successor, also a Frenchman, remained until October of the 6th year of Meiji (1873). Thus, these two Frenchmen did much to transplant the knowledge of French accounting and business experience into the management of Japanese factories. The bookkeeping and accounting of Japanese industrial enterprise owe much to the French for their prevalence and development. This fact was recognized when the Japanese Government decided to study the French system of bookkeeping and accounting, and accordingly the Industrial Department ("Kobusho," corresponding to the present-day Department of Commerce and Industry) ordered Kitazo Inagaki, an officer of the department, to go to France to study French accounting methods. This was probably the first time that a Japanese officer went abroad to study accountancy. Inagaki stayed in France for eighteen months studying mainly French bookkeeping and accounting. He appears to have devoted most of his efforts to commercial, bank, and factory accounting.

Now that the French influence has been reviewed, the English influence will be briefly considered.

It is not known in precisely what year the English system of bookkeeping and accounting was introduced into Japan; but the channel of importation is believed to have been the manufacturing industry, just as in the case of the French system. For example, a machine factory operated by Englishmen in Kobe, Japan, in the early years of Meiji (about 1867–1870), which was the predecessor of the present Kawasaki Dockyard Company, Ltd., had a Chinese bookkeeper well versed in double-entry bookkeeping handling the accounts of the factory under the supervision of an Englishman—which shows that the English system of accounting had then been introduced into Japan. Also, the Nagasaki Iron Works, in Nagasaki, Japan, which was the predecessor of the Mitsubishi Dockyard Company, was founded in the 3rd year of Ansei (1865) and although controlled by Dutch at the time of its organization, French, and later English, were in control when the Meiji Era came. Unfortunately there remains no evidence of the kind of bookkeeping and accounting system used, but when the English were in control the English system of accounting was probably used, for the manager, Mr. Kyojiro Nagamochi, was said to be well versed in English bookkeeping and accounting. Furthermore, in the 32nd year of Meiji (1899) the accounting system of that company was revised, chiefly by the English accountant then employed there. This revision, although affected in only a single company, could properly be said to have accelerated the development of Japanese bookkeeping and accounting in general.

Lastly, Japanese bookkeeping and accounting were influenced by the system used in the Netherlands. A mint, founded by the Japanese Government in the 2nd year of Meiji (1869), began actual operations in October, 1870, with a Dutch accounting system. The accountants of the mint, moreover, were a Portugese and a Japanese, the latter having studied accounting from a Dutchman living in Nagasaki, Japan.

It is said that the first and earliest accounting book imported into Japan was written by a Dutch author. A feasible theory is that this book, named "Vollelig Theoretisch eu poctisch hond block Het Italian of Koopmans Boekhoden," by W. Oud Shoff, published in Rotterdam in 1833, was presented to the Nabeshima family by a Dutchman living in Nagasaki in 1847.[1]

FIRST LITERATURE ON DOUBLE-ENTRY BOOKKEEPING IN JAPAN

As explained in the previous section, the technique of bookkeeping and accounting was introduced into Japan by the practical business men of France, England, and the Netherlands. Introduction of the technique alone, however, did not suffice to make the basic principles thoroughly understood. Therefore, thoughtful Japanese of the time, recognizing the difficulty of placing the development of accounting on a sound founda-

[1] In view of the uncertainties regarding this book it is omitted from the list in the next section on "First literature on double-entry bookkeeping in Japan."

tion with the introduction of technique only, and knowing the existence of scientific and systematic principles of bookkeeping and accounting abroad, tried to import literature on the subject; the first books on accounting and bookkeeping were imported from the United States and Great Britain.

The first book in Japanese on bookkeeping and accounting appeared in June of the 6th year of Meiji (1873). It was entitled "Choo-ainoho" and had been translated by Yukichi Fukuzawa, the founder of Keio University, Tokyo. As shown in its introduction, it was a translation of the text-book "Book-keeping" by H. B. Bryant and H. D. Stratton, teachers in an American business college, published in 1871. The Japanese translation consisted of four volumes in Japanese wood-cut printing, divided into two sections containing two volumes each. The two volumes of the first section described single-entry, and the two volumes of the second section double-entry bookkeeping. This work was not only the first in Japan on the subject of bookkeeping and accounting, but even now after some sixty years, all students of bookkeeping and accounting are taught to look upon it as the pioneer work in its field; it is regarded as the model for accounting books of later years. "Bookkeeping" by Bryant and Stratton may thus be said to have been the first book to introduce accounting principles into Japan. In other words, Japan got its first theoretical bookkeeping and accounting instruction from the United States. This fact has had an important influence on the development of Japanese bookkeeping and accounting. Since publication of the late Professor Yukichi Fukuzawa's translation the development of bookkeeping and accounting science has been so remarkable that there have been several hundred volumes on the same subject published in the Japanese language up to date. Consequently, sincere gratitude is due the American Bryant and Stratton, and the Japanese Professor Yukichi Fukuzawa for the services that they have rendered Japanese accounting.

The Japanese translation of Bryant and Stratton's book was very difficult at that time for Japanese readers to understand. But when, after hard study, the real meanings of the principles did come to light each chapter, indeed each phrase, was so new and illuminating that it astounded the reader with its delicate shades of theory, and affected and surprised Japanese of that time so deeply that the authoritative works on accounting in the United States began to be imported into Japan immediately afterwards. This, of course, helped Japanese bookkeeping and accounting to develop and progress. In fact, the author has in his private library the following books by Bryant, Stratton, et al., which were imported at that time:

1. Bryant, Stratton, and Packard:
   National Bookkeeping: an analytical and progressive Treatise on the Science of Accounts, and Its Collateral Branches, Prepared as a book of reference for the counting house, and also as a Text-Book in High Schools and Academies. 1869.
2. Packard and Bryant:
   Counting-House Book-keeping; embracing the Theory and Practice of Accounts: and adapted to the use of Business Colleges, the Higher grades of public and private Schools, and to self-instruction. 1878.
3. *Common School Book-keeping.* 1878.

The second book in Japanese after Professor Fukuzawa's translation was Ginko Boki Seiho" (Bank Bookkeeping) prepared under the auspices of the Department of Finance in December, 1873. The Japanese Government being desirous of installing uniform accounting methods in the numerous Japanese national banks of that time invited an Englishman, named Alexander Allan Shand, to the Bureau of Bank Notes for the purpose of preparing a book on the forms and methods to be used in bank bookkeeping. The result, when translated into Japanese, was published as the above-mentioned "Ginko Boki Seiho." Like its predecessor, it was later regarded as a model.

Present-day accounting philosophy was also present in this book. For in the introduction the Chief of the Bureau of Banknotes, Kensei Yoshikawa (later Minister of Finance) stated: Nothing is more important

than accounting, without which expenditures could not be ascertained, and without which profit and loss could not be determined. If expenditures are unknown and profit and loss unsettled, how can anything be planned or decided? Therefore, whenever there is accounting, there is always an accounting record. If there is no accounting record neither expenditures nor profit and loss can be found either in detail or in the fundamental tendencies." A similar spirit pervades the other sections of this book, which founded the present-day Japanese bookkeeping and accounting philosophy, and gave it a strong initiative. The fundamental ideas of contemporary Japanese accounting are found in this ancient work.

Shand's bank bookkeeping system was gradually improved and enlarged until it grew into the present system, which may be favorably compared with any of the foreign systems. When the translation of his work first appeared, however, its explanations were so complicated that very few understood the real meanings. Therefore, in the following year, i.e., in 1874, the Bureau of Banks of the Ministry of Finance employed instructors to teach Shand's book and other essentials of accounting practice to Japanese bankers who wanted to study the subject. Later, in the 10th year of Meiji (1877), the Government established a school for teaching bank accounting, and appointed Rokuro Fujio and Saburo Tanaka, who had previously been taught by Shand himself, as instructors. The Government also let these two teachers prepare problems and exercise on bank accounting. The number of the students gradually increased and in April, 1878, the Government ordered the officials of each prefecture handling banking matters to study at the school. This, of course, contributed toward the prevalence and deeper study of bookkeeping and accounting in Japan. The aforementioned problems and exercises were compiled and published by Teiichi Sakuma as "Ginko Boki Reidai." This book was published in May, 1879. Answers to its problems and exercise were also prepared and published by Sakuma in May, 1881, under the title of "Ginko Boki Reidai Kaishiki." These two books, "Reidai" and "Kaishiki" are believed to have contributed greatly towards the distribution and development of the Shand system of bookkeeping.

The translations of Bryant and Stratton's and Shand's books were followed immediately by "Marsh Kiboho," a translation by Gishu Kobayashi of the bookkeeping work of an American named C. C. Marsh. The Japanese edition, in five volumes, was published by the Department of Education. The first two volumes, published in March, 1875, described single-entry bookkeeping, and the remaining three, published in September, 1876, described double-entry bookkeeping. In addition, the following books written by Marsh, who was reputed to be an outstanding American accountant, were undoubtedly imported into Japan at that time:

> "The Science of Double Entry Book-keeping, simplified by an Infallible rule for debtor and creditor"
>
> "The Art of Single entry book-keeping, Improved by the Introduction of a proof or balance"
>
> "Bank Book-keeping and Joint Stock Accounts"

The last-named book, according to a copy in the author's library was published in 1866 by D. Appleton and Company, New York. In Osaka in April, 1880, a book entitled "Jimmin Hikkei Boki Teiyo" (Elementary Bookkeeping) by Zippo Yamada, appeared, the original of which, according to Yamada, was Marsh's "The Element of book-keeping in double entry."

A bookkeeping textbook (title unknown) by E. G. Holson, an American business college instructor, published in 1873, was reproduced in Japanese under the title "Bokigaku Reidai" by Shuutaro Morishima, an instructor at the now extinct Mitsubishi Commercial School, in October, 1878.

As previously stated, the bookkeeping and accounting books published in Japan during the formative period of Japanese bookkeeping and accounting were chiefly derived from books that had been published in the United States. From these facts it is evident that the Japanese of that time in transplanting new ideas into the undeveloped and fertile

fields of Japanese commercial and industrial life were in close relationship with the leading American thought on the subject.

ORIGIN OF THE EDUCATIONAL SYSTEM OF BOOKKEEPING AND ACCOUNTANCY IN JAPAN

Although beset with internal crises during the period of seven or eight years following 1867, the Japanese Government endeavored to improve education. Accordingly, in October, 1872, it enacted an ordinance establishing agricultural and industrial schools, and in April of the following year, 1873, for the first time it provided for the establishment of commercial schools. The latter ordinance outlined the commercial course of study and provided for the inclusion of bookkeeping in the curriculum.

Despite the fact that provision for commercial education had thus been made in the Japanese educational system, the social conditions of Japan at that time did not warrant the establishment of a commercial school. Hence, no school was started. Such was the contrast between conditions then and now. In August, 1875, however, Yuurei Mori (who later became Minister of Education) established a business school in Tokyo. It was subsequently transferred to the Japanese Government and called the Tokyo Higher Commercial School. Still later it became the present Tokyo University of Commerce.

Bookkeeping was first taught in this business school. According to the curriculum, the "abbreviated" and "true" systems of bookkeeping were taught, the former being single-entry and the latter being double-entry. Bryant and Stratton's "Bookkeeping" was used as the text.

The next school formed was the Kobe Business School, established by the Hygo Prefectural Government. This school, the predecessor of the present Kobe Commercial School, was opened in January, 1878. Its chief aim being to teach the necessary knowledge of commerce, it had numerous courses in its curriculum, among which bookkeeping and accounting courses held an outstanding position, as shown by the fact that included among them were the traditional bookkeeping of the Port of Hygo (Kobe), single-entry bookkeeping, double-entry bookkeeping, bank bookkeeping, etc.

Then followed the establishment of the Mitsubishi Commercial School (now defunct) in March, 1878. At the time it opened, this school provided for three years of study in its preparatory course, and two years in its main course. No bookkeeping was taught in the preparatory course, but elementary bookkeeping was taught in the first year of the main course, and advance bookkeeping in the next year. Two books used there—among the earliest Japanese bookkeeping texts—were Morishima's translation, "Bokigaku Reidai" (previously described), and "Bokigaku Kaitei" by Iwakusu Morishita and Shuutaro Morishima.

In January, 1880, the Osaka Business School was established in Osaka by Tomoatsu Godai, and in 1882 the Yokohama Commercial School was organized in Yokohama by Kinroku Ono. Both of these schools taught bookkeeping, and since their graduates applied this bookkeeping in practical business a knowledge of bookkeeping naturally spread in Japan.

An interesting development was the spread, about 1882, of bookkeeping instruction into factory apprentice schools where business men trained their employees. For instance, the revised curriculum of the apprentice school of the Yokosuka Dockyard Company in September, 1883, comprised the following: Japanese and Chinese classics, English language, arithmetic, plane geometry, drawing, and bookkeeping.

Thus, under the name of "boki" (the supposedly onomatopoeic equivalent of "bookkeep"), double-entry bookkeeping in Japan has developed through the educational channels described.

THE TENTATIVE STATEMENT OF PRINCIPLES

DR Scott

There is a close parallelism between the development of law and the development of accounting. Both arise out of a world of concrete relations and, like Antaeus, they must maintain contact with that world or lose their strength.

If there is any general criticism to be made of the tentative Statement of Principles prepared by the Executive Committee of the American Accounting Association, it is that the statement shows inadequate recognition of the fundamental principle that all accounting principles and practices must preserve a vital functional relationship to a world of changing economic facts.

Roughly speaking there are three major functions served by accounts. In the order of their development, these functions are the record function, the control function and the protection-of-equities function. The control function goes back at least as far as the beginning of the practice of closing the books regularly but its major development has been of very recent date especially in connection with modern industrial accounting.

The protection of equities function arose as soon as the unit of business enterprise became a complex unit including different interests but its major development also has been in the recent modern period of complex capital structures. Primarily through the development of the protection of equities function accounting has acquired its status as a profession. And at the present time it is through a further extension of the same function that accounting is becoming increasingly an instrument of social control.

To many accountants, accounting is essentially a record of business transactions. Those who hold such a view recognize that incidental to its function as a record of transactions, and supplementary thereto, accounting also serves management as an instrument of control and society at large as a means of protection of various economic interests. Nevertheless accounting remains for these accountants essentially and fundamentally a record of business transactions.

In contrast with the foregoing conception, there is a tendency among less conservative students of the subject to define accounting in terms of its latest rather than its earliest function. So defined accounting is a body of rules and principles and a system of techniques designed to differentiate and protect various interests which are jointly involved in the conduct of current business and economic activities. It is understood, of course, that, incidental and subordinate to its protection of various economic interests, accounting still serves as a record of business transactions and as a tool of management. This latter view of accounting makes it essentially an instrument of economic adjustment and social control.

These two viewpoints are implied in the statement that, "Accounting is thus not essentially a process of valuation, but the allocation of historical costs and revenues to the current and succeeding fiscal periods."

Our definition of such subsidiary terms as income and cost or expense will inevitably be shaped by the notions which we hold with regard to what is the fundamental character of accounting. To those who think of accounts as essentially a record of transactions, income appears in terms of gain from completed transactions. But to those who think of accounting in terms of the control function and the protection of equities function, it appears that we have long since abandoned such a conception of income.

In the production and sale of goods we may well enter into a contract to sell in one fiscal period, produce and deliver the goods in a second fiscal period and collect the account of the purchaser in still a third period. Formerly such a sale was treated as an income of the period in which the cash was received. Now the prevailing rule is to treat it as an income of the period in which title to the goods passes, although exceptions are sometimes made as in the case of accounting for instalment sales. The shift from the date

of collection of cash to the date of the passing of title to the goods sold was not made as the result of an independent decision that the transaction really closes with the passing of title to the goods. The change was made rather on practical grounds in the belief that keeping the accounts that way would increase their value as a means of control and would be better for all interests involved. The change thus rested on an appeal from the record function to the control and protection of equities functions. Since the appeal was implicit rather than explicit, many accountants have never recognized it but have gone on assuming that income still accrues on a basis of the completion of transactions. To reconcile this view with the new rule of thumb, that is the passing of title, they have set up the sort of fiction which is common in legal evolution. They have set up a fictitious completion of the transaction at the passing of title to the goods sold. In doing so they have redefined the general principle to make it agree with the rule of thumb. Thereby they have destroyed its character as a general principle.

The redefinition of accounting in terms of the control and protection of equities functions has centered around the work of industrial accountants. It has come primarily from what has been called cost accounting. But cost accounting, so called, is no more cost accounting than it is income accounting. A major objective of such accounting is managerial control. Subordinate to this fundamental purpose are (1) the coordination of costs with operations or processes, as a means of selection of the most efficient processes, and (2) the coordination of costs with incomes, as a means of guiding productive efforts into the most profitable channels. The second of these is just as necessary as the first for the reason that low cost of production is never absolute but always relative to the resulting income.

Expressing these objectives in terms of the ordinary income statement, there must be coordination of incomes and expenses with each other and with operations if the statement is to have a vital functional relationship to the direction of the business enterprise which it represents.

Let us take one of many possible specific illustrations. If a manufacturer is working under a workman's compensation law, he may shift his risk to others by taking out insurance covering his liability in case of accidents. All accountants agree that if he does so his current premiums constitute a cost chargeable to current operations. But if the manufacturer elects to carry the risk himself, he throws accountants into a serious controversy among themselves. Those who hold the view that accounting is fundamentally a record of transactions contend that the manufacturer's cost comes only when he is compelled to make compensation payments as a result of accidents. But those who are looking at the same facts from the viewpoint of accounting control insist that the operations of each period and the products produced therein carry the same risk of such accidents as every other period of similar production, regardless of the time when accidents actually occur.

The following significant paragraph is taken from the closing discussion of the Tentative Statement of Principles.

"If income and profits are to have any meaning, the factors influencing them must be isolated and their net result expressed in a separate account or section of the accounts. This is possible if all profits or losses are carried through a single medium to the earned-surplus account. It is impossible if accounting procedure permits the creation of various types of operating or surplus reserves to which may be carried expense charges or income credits."

All doubtless will agree with the first sentence but many will object that the second sentence does not point the way to a realization of the objective set up in the first. The last sentence begs the whole question in objecting to the carrying of expense charges or income credits to operating or surplus reserves. No reputable group of accountants wants to do that. The real issue is whether the items which some would carry to such reserves are expense charges. To cite another specific example, in the use of a Reserve for

Bad Debts the question at issue is whether the expense charge consists of (1) a calculated percentage of sales which is to be charged to expense in the period in which the sales are made when the reserve is credited or (2) the loss which is recognized when a bad account is written off the books. The above quotation and point 17 in the Tentative Statement clearly imply the latter alternative.

COSTS AND VALUES

The first point in the Tentative Statement of Principles reflects a dominance of the record function of accounts. Its emphasis upon historical cost is so literal that it precludes even the correction of an earlier historical cost by a later historical cost even for identical assets unless the later cost happens to be the lower. If the later cost is higher both stand as authoritative in spite of their inconsistency.

If we were to purchase securities for $10,000 and, when their market value was $20,000, were to trade them for machinery it would be misleading to treat the machinery as worth only $10,000. If the machinery itself doubles in value after we acquire it and we trade it off piecemeal for products through its use and depreciation, should its depreciation be based upon $10,000, $20,000 or $40,000?

Whether depreciation is to be based upon historical cost or current values is a matter of the relative emphasis to be placed upon the record function and the control function of accounts. A rule of thumb application of historical cost is a serious obstacle to effective development of the control function.

Number two in the twenty points of the Tentative Statement is unfortunately vague. The words "a substantial change in beneficial ownership" do not convey any clear conception. That "cost is measured by cash outlay" is clear enough but when the sentence continues, "or by the fair market value of property acquired in exchange for securities," it is hard for the reader to escape confusion. When property is acquired by issuing or trading securities for it, of what is its fair market value a cost?

Point three, referring to depreciation and depletion, starts off as if bestowing upon the accountant all the discretion taken away from him in point number one. The latter part of point three, however, makes it clear that discretion is to be allowed only within the limits previously laid down.

Point number four, referring to writing assets back on the books after they have been written off, is an attempt to discourage manipulation of accounts at the cost of making it difficult to correct mistakes honestly made. Neither business managers nor accountants are infallible. If mistakes are made in good faith their correction when discovered should be taken as a matter of course.

Point five scarcely needs comment. Even the legal application of accounting principles is broad enough in its interpretation of costs to cover depreciation, depletion and obsolescence.

Point number six referring to bond discount is unobjectionable. The only query it raises is whether such a detail belongs in a statement of basic principles. Perhaps a better statement would be to suggest that in balance sheet presentation all valuation accounts should be shown as deductions from or additions to the accounts with which they are to be associated.

Point number seven is an amplification of the position that the formal accounting record should be based upon historical costs. The view that accounting is essentially a record of transactions is clearly implied in the following quotation: "A history of cost and cost amortization is a consistent record of actual occurrences measured according to an intelligible formula, and constitutes an essential starting point in financial interpretation."

The following concession is however included in the discussion: "An extreme change in the value of money might vitiate the usefulness of cost records but there seems to be no sound reason for repeated adjustments of asset values for the ordinary changes in price levels commonly experienced from one generation to another."

A specific example would help to clarify

the discussion at this point. For instance, would the change of prices in the United States between the middle of 1929 and the middle of 1932 justify an abandonment of historical costs?

MEASUREMENT OF INCOME

Points eight to thirteen inclusive, dealing with the measurement of income, do not define income except by inference. By implication, income is made to include all gains except those arising out of dealings with the corporation's own stockholders. The form of income statement suggested assumes such a definition of income. This income statement is divided into two sections. The first covers incomes and expenses of operations of a regularly recurring nature and the second is a catch-all for all other items.

The chief objection which will be advanced against this proposal is that it destroys the value of the net-income concept for statistical and managerial purposes. The current trend in managerial accounting is to segregate incomes and costs of the major activity of the business and to show the net result as Net Operating Income. To this statement is then added Other Incomes such as income from outside investments. Costs of Other Incomes are deducted from them so that Net Operating Income plus Net Other Incomes equal Net Income for the fiscal period. Gains not arising from regularly recurring operations and costs or losses not chargeable to such operations are thus relegated to some type of surplus adjustment. The tendency to use this type of statement has given rise to so many forms of surplus adjustments as to suggest the desirability of a formal surplus reconciliation which would take its place along side of the balance sheet and income statement as a third summary report.

Perhaps a threefold income statement would provide a workable compromise between the position just stated and views expressed in the Tentative Statement of Principles. In such a statement the first section would deal with the major activity of the business enterprise and the second with minor activities. Both would be limited to incomes and expenses of regularly recurring operations and the net result of both would be net income for the fiscal period.

The third, or net worth section of such a statement, would include all other items necessary to account for changes in net worth. In addition to the net income, it would include credits to operating reserves (offsetting charges to operating expense) and also debits for items chargeable to those reserves; debits and credits to surplus reserves such as one which might be set up for fluctuations in inventory values; debits and credits for extraordinary losses and gains, and finally debits and credits representing dividends and other changes in net worth arising out of dealings with stockholders. The final result would be Net Change in Net Worth.

Coupled with such a statement might well be a requirement that, however much analysis is used in the balance sheet, proprietorship should always be summed up in a single figure. A requirement of this sort would have a salutary effect. It would emphasize the point that the only proper contents of a balance sheet are assets, liabilities and proprietorship. All items should be treated in a way to show clearly the relations between assets, liabilities and proprietorship. For example, a credit balance in an operating reserve, like one for Workmen's Compensation Liability, would be a surplus item whereas the Reserve for Bad Debts would be a valuation item deductible from receivables.

In the evolution of accounting, the simplification of functions and results is highly important. However, increasing complexity of forms and procedures may well be necessary in order to afford functional simplicity. If the goal of cost accountants were realized the first section of the statement proposed above would consist merely of gross sales adjusted to net sales less manufacturing cost and selling cost of net sales. Such a simple result could be achieved only through a complex system of accounting for expenses and incomes.

If it were deemed of sufficient importance to do so, dividends, sales of stock and other

changes in proprietorship resulting from dealings with stockholders might be shown separately from other items in the net worth section of the above statement but even so it would be highly desirable that they should come within some logical, systematic presentation leading to the final figure of Net Change in Net Worth. This would cover the suggestion made in point twenty of the Tentative Statement of Principles.

Point thirteen states that if it is desirable to revise one or more income statements, at least the next following report should include all revised statements. Taken by itself no objection is to be made to this. However, point four held that costs improperly charged off should not be reinstated except when there is a recasting of the income statements of all periods affected by the improper charges. In this connection it may be worth pointing out that if the error has persisted over many fiscal periods the cumulative amount involved might be considerable without placing a large burden of error on any one period.

Taking points four and thirteen together there is an implication that the rewriting of income statements might well be made a matter of common practice. Such a view is open to serious criticism. If we are to have one income statement for 1934 dated Dec. 1934; another dated Dec. 1935; a third dated Dec. 1937, and so on, we soon would add to rather than decrease the confusion of financial statistics. This is not to say that income statements should never be rewritten but only that the practice is to be resorted to only upon grounds of very serious import.

CAPITAL AND SURPLUS

Point fourteen states that corporate proprietorship is to be divided into paid-in capital and earned surplus. Then point fifteen defines paid-in capital to include stock dividends, recapitalizations and other transfers from Earned Surplus to Capital Stock. The use of the term paid-in capital thus becomes a little dubious.

In the days before no-par stock a corporation could sell its stock above par and provide a surplus thereby. Little if any accounting or legal limitation was placed upon the disposition of such a surplus. The practice was sometimes used as a means of providing a buffer to absorb operating losses anticipated in the establishment of a new business. There was reputable authority even for the payment of dividends out of such a surplus if the directors had so desired.

Perhaps it was the leniency allowed in the disposition of such a surplus which led to the device of no-par stock and the reprehensible accounting which too often has been associated with it. The Tentative Statement of Principles undertakes to prevent such abuses by providing that no losses of any description may be charged to paid-in surplus. Thereby the restriction placed upon management in its use of funds contributed by stockholders is even more rigid than it was in the days before no-par stock. Perhaps such restriction is necessary. Certainly it appears to be justified by the malpractice which has sometimes been associated with the accounting for no-par stock.

However, the whole problem would be simplified if accountants would take the position that all funds received from the initial sale of no-par stock should be credited to Capital Stock and that gains from the sale of reacquired stock should be credited to the same account whereas losses on dealings in the company's own stock should be charged to surplus.

If the foregoing suggestion were consistently followed in practice and the procedure recommended in the Tentative Statement of Principles were used, there would be only one surplus account, Earned Surplus. There might also be surplus reserves but whenever such reserves were reduced or discontinued, the amounts of their reductions would be credited to Earned Surplus.

Such a limitation upon the presentation of surplus is of doubtful value. For example, if bonds were paid off by use of a sinking fund and there had been accumulated an offsetting Sinking Fund Reserve, it is not conducive to the most accurate presentation of the facts to close such a reserve back to Earned Surplus, thus combining it with the current balance of undistributed profits. It

would be more clearly descriptive to show it as "Surplus Arising from Payment of Bonds Out of Profits" in the balance sheet next following the payment of the bonds. If there were other similar items which by policy of the management were earmarked as set aside for permanent investment, they might well be combined in an Invested or Capital Surplus. The only safeguard necessary is that the record should show how the account has been built up.

The objective of points fourteen to twenty, which are intended to make an effective distinction between capital contributed by stockholders and Earned Surplus, is wholly commendable. However, when Earned Surplus is so defined that it includes capital gains, the significance of the distinction is undermined. Indeed the inclusion of capital gains in income is a contradiction in terms. The very essence of the concept of a capital gain is its exclusion from income.

There appears to run through the Tentative Statement of Principles a tacit assumption that the balance sheet should be as nearly as possible an automatically derived summary of the results of past transactions. The idea that the balance sheet should be an accurate presentation of the present financial position of the enterprise is subordinated to such a tacit assumption. This tendency to make the balance sheet a backward looking instrument is illustrated in point nineteen referring to the absorption of losses into the capital account by some form of recapitalization. It is suggested there that under such circumstances any subsequently accumulated surplus should be labeled as accruing from the date of the recapitalization.

This particular suggestion does not impress the writer as being either practicable or desirable. The purpose which is back of it might better be achieved by adopting the method of accounting for no-par stock recommended earlier in this article and requiring that all capital stock accounts should carry as part of their identification the date or dates of authorization of the class of stock covered in each case.

CONCLUSIONS

The difference between the viewpoint from which these comments have been written and the viewpoint of the Tentative Statement of Principles lies in a different relative emphasis upon the fundamental functions of accounts. The Tentative Statement of Principles builds primarily upon the record function whereas the viewpoint represented by these comments makes paramount the protection of equities function and subordinates the record function even to the control function. From this difference of emphasis there result many differences in subordinate concepts. One of the most important of these relates to the concept of income.

Whatever our more fundamental views, we all agree upon the necessity of numerous rules of thumb to govern the treatment of the many different kinds of incomes in a great variety of business enterprises. These rules of thumb tell us in practice what items are to be treated as income and to what income periods they shall be allocated.

But how do rules of thumb arise? Are they products of practice without any principle underlying their selection?

Like other institutional developments, accounting rules of thumb arise out of the give and take of conflicting interests in the practical process of living. Their capacity for survival is dependent upon the effectiveness of their adjustment of the conflicting interests which shape their development. We have, therefore, a principle by which to judge rules of thumb. Those are best which afford the most equitable adjustment of the conflicting interests concerned with the conduct of business enterprise. If the income of a given period is overstated, certain interests will be harmed thereby and others unduly benefited. Any rule of thumb which leads to such a result is undesirable.

By recognizing the principle which underlies the development of rules of thumb and making it explicit, we coordinate their development and thereby effect an adjustment of interests on a broader scale. It is by such recognition and application of principles which are implicit in concrete social relations

that a more complex form of society develops.

Both the managerial or control function of accounts and the protection of equities function call for a coordination of incomes and expenses. Hence, if the conception of an equitable adjustment of interests underlies the determination of income, it underlies also the determination of cost and net income. The net income is, indeed, a key factor in the adjustment of interests.

Even if all of the foregoing analysis is accepted, there still remains the question whether the conception of income implicit in the Tentative Statement of Principles is the one which represents the best available adjustment of the interests involved in business enterprise.

The elements or factors involved in the conduct of business enterprise may be grouped in a threefold classification. The first and largest group includes all those factors whose functions and services are planned and controlled by the management. In contrast with this group, there is for each business enterprise a larger or smaller number of irregular and unpredictable elements which are wholly outside the control of the management. In between these two extreme groups are found various factors which are not directly under the control of management but to which the management can adjust controlled operations upon a statistical basis. In this intermediate group are to be found all of those factors which are covered by one or another form of insurance and also such items as loss from bad debts and depreciation.

An important goal of good management is to bring as many factors as possible into the first and intermediate groups: to perfect its control over those in the first group and increase the accuracy of adjustment to those in the second group. The achievement of this goal is a case of learning to do by doing. Management can work out its improvement only through experience. And in the process it is important that there should be regular and systematic measures of the results of controlled operations including adjustments for those factors to which controlled operations are adjusted. The position taken here is that accounting should furnish such measures and that the logical measures for the purpose are Net Operating Income and Net Income.

Those whose thinking is dominated by the record function of accounts are likely to object here that a business enterprise cannot escape the effects of those factors which lie outside the control of the management and that therefore those effects should be brought into the statement of Net Income. Such is the position taken in the Tentative Statement of Principles which quite consistently makes no difference in its accounting for the second and third groups of factors in the above threefold classification.

Perhaps the significance of the issue here raised can be made clearer by a figurative illustration in which business management is represented by a boxer. The boxer may so tie up his opponent and keep him so much on the defensive that he has no opportunity to strike an offensive blow. We may liken this capacity of the boxer to control his opponent to the ability of management to control certain factors in business operations.

When his opponent does strike an offensive blow, the boxer may soften it by retreating; he may parry it with his hand or arm; he may dodge it altogether or enough to render it a harmless, glancing blow. If he does not succeed in interposing any defense, he must take the blow and stand up under it if he is to remain in the contest. The defensive skill of the boxer consists in his ability to prevent the striking of blows by his opponent and his ability to defend himself against the blows which are struck.

The skill of business management consists in its ability to control factors involved in the operations of business and its ability to adjust operations to factors which it cannot control. Any technique of analysis which failed to distinguish between blows that are parried and those which are absorbed as "punishment" would be of very little value to a boxer. Similarly, an accounting analysis which fails to distinguish between factors to which operations of a business are effectively adjusted and those to which they are

not so adjusted is of limited value to business management. We might well add to society also for the increase of managerial efficiency is no less significant to society than it is to the interests involved in particular business enterprises.

The principle that Net income should be a measure of the results of controlled operations plus systematic adjustments to uncontrolled factors does not mean that it should never include the effects of irregular or unpredictable causes. Effective adjustments may sometimes be made for such causes. For example, war at home or abroad might greatly change the demand for the products of a given enterprise. Under such circumstances the management would readjust its program of operations and the effects of this unusual factor should be reflected in the income statement.

Whatever our fundamental view of accounts, we all agree that they should not be made a means of misrepresentation. Any management which uses them as a means of misrepresentation is guilty of fraud. And any member of the accounting profession who connives at such malpractice is guilty of a crime against society regardless of the technical nature of his action; whether it is or is not punishable at law.

The best means of guarding against the misuse of accounts is an intelligent constructive guidance of their developing functions. The Tentative Statement of Principles does not assume such a responsibility. It presents a narrow conception of accounts. Its tone is one of restriction upon management rather than one of helpfulness to management. Its bearing upon the problem of accounting development can best be expressed, perhaps by an analogy from the medical field.

One of the important problems of the medical profession is to protect the public from exploitation by various kinds of medical malpractice. Some members of the profession attack this problem by insisting that diseases be treated only in accordance with currently accepted methods. However, the more generally accepted attitude is one which demands only that new techniques and new methods shall be carefully and scientifically tested before they are applied. The second attitude opens the door to further development of the profession.

With its narrow conception of accounting and its generally conservative interpretation of theory and practice, the Tentative Statement of Principles would, if consistently adopted, tend to retard the development of accounting. In fact the statement envisages no constructive development of accounting theory and, in the opinion of the writer, that is the point upon which major emphasis should be placed.

Notwithstanding the critical tone of the foregoing discussion, the writer does not intend to discount in any way the importance of the work of the executive committee of the association in its preparation of a statement of principles. The preparation of such a statement is in itself a constructive step. Perhaps the burden of the complaint in this article can be expressed best by saying that the work of the committee has been directed towards a constructive development of practice without a corresponding and necessary constructive development of theory.

INADEQUATE DEPRECIATION METHODS

E. A. Saliers

Perhaps no topic has been the subject of such wide differences of opinion as the method used, under given conditions, to make allowance for the expense which results from the disappearance of value of physical assets, commonly termed depreciation. These methods vary from those which result in a minimum charge to those which result in a maximum charge for any given period. Absolute uniformity in this respect is neither attainable nor desirable. Allowance must always be made for natural differences arising from geographical location, climate, and the character of the asset in question. Neither can the differences of opinion of individuals be entirely erased. De-

preciation will long continue to be a controversial subject. By recognized opinion, however, much that is erroneous or dangerous may be eliminated from the list of proposed procedures. Methods which may be condemned are those which, if persisted in, result in financial embarrassment or bankruptcy, as well as in gross inequality in treatment of the various parties interested in the progress of the enterprise.

Business men, accountants, engineers and others now recognize that the requirements of the Treasury Department relative to income taxation cannot be met unless certain well-recognized procedures are followed. The rulings of the Treasury Department are not necessarily in accord with the best accounting practice, but, as a rule, they are; and whether they are, or are not, the methods which they recognize are the ones which must be adhered to when reporting for tax purposes. The purpose of this article is to describe certain methods of allowing for depreciation which, while inadequate, nevertheless possess considerable vogue. It is believed that this plan is justified in that there is still much loose thinking on the subject, resulting in the adoption of procedures not conducive to good results.

Blanket Rates. The impetus given to more adequate methods of accounting for depreciation of plant and equipment by the promulgation of Treasury Decision 4422 is unquestioned. It is therefore in order to inquire into the results which are secured where depreciation rates are based on the average life of assets with a view to determining the amount of error likely to arise where makeshift methods of computing depreciation are followed.

In striking contrast to the painstaking accuracy with which cash and merchandise are accounted for are the methods still frequently employed in calculating what Leake calls the "expired outlay on plant." Business executives may still be found who assert that as long as plant is kept in efficient operating condition no depreciation occurs. They state that the actual outlay on renewals measures the extent of the depreciation which it is necessary to reflect in the account. Under such a plan of accounting there is no reserve set up to measure accrued depreciation because depreciation is presumed not to exist.

Fortunately, the long-continued discussion of depreciation has eliminated some of the crudest plans of accounting for this important item of cost. Even yet, however, the procedure with reference to depreciation frequently produces results which are so erroneous as to vitiate all calculations of costs and even render ineffective fundamental plans of management and finance. These errors are the result of the failure to recognize the need of adequate records of plant and equipment. Adequate records make it clear that depreciation and obsolescence go on regardless of the adequacy with which repairs and renewals are made. Adequate records also make it necessary to exercise care in determining whether expenditures should be charged to some asset account or to expense. Keeping a large investment in fixed assets in a single account such as "Land and Building" is like keeping a single account for all customers, clearly an impossible procedure because of the untold confusion which would arise. It can be done only because the fixed assets are inanimate and there is no independent third party whose interests make it possible for him to demand accurate and timely accounting for such fixed assets. Nevertheless, unless a detailed plant ledger is kept, the investment in buildings and machinery soon becomes unknown and the only solution is to revise the account on the basis of an expert appraisal. Appraisals have their purposes in modern business, but one of them is not to take the place of correct accounting procedure for fixed assets. Without correct procedure the same chaotic condition must soon recur.

The inevitable consequence of inadequate methods of accounting for plant and machinery is that a so-called composite depreciation rate is computed on the balance shown in the capital asset account, such as the Land and Buildings account, or the Plant and Machinery account. As a result both the asset account and the depreciation reserve account become meaningless except

insofar as they may be said to "look about right." Under such circumstances depreciation is frequently computed on assets that have been abandoned or salvaged. There being no records, taxpayers are at the mercy of internal revenue agents who may disallow whatever depreciation deductions they think the situation warrants.

Effect of Incorrect Methods Illustrated. Perhaps one of the greatest sources of error is the failure to remove fully depreciated items from the asset account. Assume that on January 1, 1920, a concern begins business, investing $500,000 in fixed assets. If, on January 1, 1930, ten years later, $200,000 of the assets have been fully depreciated and largely abandoned, but are still carried in a property account, it is evident that the application of a so-called composite rate of depreciation will result in an excessive depreciation charge. A composite depreciation rate may be made to work providing it is changed to conform with the changing average life of plant. This, however, is difficult to accomplish, and in practice any adequate attempt to do it is seldom made. In substantiation of this the following is quoted from A. B. Hossack's "Accounting Procedure for Capital Assets and Depreciation":[1]

> To illustrate this by a specific example, I would cite an investigation recently made of a rather large plant involving a machinery and equipment account of several millions. The average life of the machinery and equipment in accordance with the inventory of some five years ago showed an average weighted life of about thirty years. The additions for a five-year period were also available and, based upon individual consideration of the life of various units, we found that the average life of the additions made in one of the years was a trifle less than eight years. This was the shortest average life on the additions in any one of the five years. Another year, the additions showed an average expectancy of useful life of an average of eighteen years. This was considerable of a spread and has a considerable effect on the average rate that should apply to the assets in existence five years subsequent to the original data. The products had not changed but the company had installed different types of machines having a materially different useful life.

[1] *Bulletin 883.* American Appraisal Company.

It is exceedingly difficult to handle retirements correctly when incomplete records are kept. The presumption is that when an item is retired it has been fully depreciated, and therefore its cost is credited to the asset account and charged against the depreciation reserve. In many cases this presumption is far from the truth, but owing to lack of definite information the proper adjustment against profit and loss, or surplus, is not made.

The only practicable remedy is in the adoption of a system of item or limited group control. Under such a plan each unit receives the attention necessary for the correct estimate of depreciation occurring in it, or in the group of like items of which it is a part. Such a system implies that there will always be available information and estimates necessary not only for computing the periodic depreciation charge but also for making the necessary adjustments upon retirement of a particular asset.

***Composite Depreciation Rates.* Where it is necessary to group items for depreciation purposes, those having the same, or approximately the same lives, should be grouped together, thus permitting the application of an approximately correct rate. In lieu of such procedure, many concerns apply a so-called composite depreciation rate to the entire plant and equipment. It is possible to secure correct results through the application of a composite depreciation rate, but usually such attempts lead to confusion and error. Moreover, it is impossible to compute losses on individual items when a composite depreciation rate is used because the composite rate does not apply to particular items of property. The most serious shortcoming of the plan, however, is that frequently items of property are continued in the property account long after they have been abandoned or scrapped.**

Treasury Decision 4422 and Mimeograph Letter 4170 state the procedure to be followed in order to satisfy the Treasury's requirements. The Treasury, in pursuance of the plan laid down in Treasury Decision 4422 and Mimeograph 4170 has developed such procedure as appears likely to secure

satisfactory results. This procedure is predicated on two primary concepts, as follows:[2]

1. The adoption whenever possible of the average rate of depreciation, coupled with the nonallowance of losses on retirements.
2. The reliance upon the ratio of the reserve account balance to the asset account balance to determine whether or not the depreciation rates allowed in the past have been excessive.

The policy adopted by the Treasury raises a question as to the accuracy of results which may be secured by the application of methods based on averages. Any such plan necessarily involves elements of error, but if the error is not material the method which produces it should not be condemned. On this point Michael Ochis says:[3]

> In actual practice there are numerous conditions under which the use of an average depreciation rate and the non-allowance of losses on retirements does not provide for the recovery of the capital sum over the useful life of the property. If losses are not to be allowed the depreciation rate should be a *composite* rate instead of an *average* rate.

This statement deserves careful consideration. Moreover, that which can be shown to be theoretically accurate may, in practice, be either quite impracticable or else less efficient than some other plan which involves the keeping of more detailed records. In practice it is frequently found that where so-called average or composite rates are used, owing to the difficulty of following the correct procedure for individual items, the Property account soon becomes a meaningless total of items, many of which are no longer in use.

Theory of Average and Composite Rates. The average life of a plant consisting of two or more units may be found by the dollar-year method. The average life being known, the depreciation rate may be computed therefrom.

Assume that a plant consists of three items costing, respectively, $1,200, $800, and $400, and having useful lives of 8, 6 and 10 years, respectively. By the dollar-year method average life is found as follows:

Cost		*Life in Years*		*Dollar Years*
$ 1,200	×	8	=	$ 9,600
800	×	6	=	4,800
400	×	10	=	4,000
$ 2,4000				$18,400

$18,400 ÷ $2,400 = $7\frac{3}{4}$ years, average life.

If the depreciation rate is based on the average life it would be $100 \div 7.75 = 12.9+\%$. What is the effect of applying such a rate to the original cost of all the items comprising a plant, and what are some of the clerical difficulties which confront the management which attempts to base depreciation on an average rate? It is obvious, of course, that the units of plant will be abandoned at times other than those forecast to date of installation. Since, however, no record is kept of the date of installation of each item it is impossible to determine, at date of its abandonment, whether or not it has lived out its estimated useful life and therefore whether or not a loss occurs in connection with its abandonment.

The installations made in any given year are almost certain to possess an average life different from that of the various items comprising plant at the beginning of the year. This makes necessary constant revisions in the average life of the plant under circumstances which make the task an extremely difficult one. In this connection J. A. Grimes, of the Bureau of Internal Revenue, has said:[4]

> The principal reason advanced for the use of a composite rate of depreciation is its simplicity. Some properties are also purchased as going businesses, and the costs of component parts of the properties are unknown. Under such conditions it may be necessary to use an approximate composite rate of depreciation, temporarily at least. Even with a composite rate of depreciation determined by guess, it eventually becomes necessary to estimate the cost of each asset when it is eliminated from the property account and from the depreciation reserve, and it probably will be more difficult and more expensive to make this estimate in the future than at the time when a property is

[2] *Lybrand, Ross Bros. & Montgomery Journal*, May, 1937, pp. 1–2.
[3] *Ibid.*, p. 2.

[4] Accounting Review, Vol. 3, p. 170.

acquired. Unless separate statistical records are maintained and estimates of the useful lives of items are revised in the light of experience, the accuracy of a composite rate is not subject to the check of actual experience, whereas an item rate is checked every time an item of property goes out of use. The composite rate of depreciation, properly determined and used, therefore, requires all of the basic information essential to the use of item rates of depreciation, and, in addition, the maintenance of special statistical records if the composite rate is to be modified in the light of increasing or changing experience.

Composite life is not the same as average life, because in determining composite life a weighted average is secured, whereas average life is determined by taking a mere arithmetic average. If losses resulting from retirement of specific assets can be ascertained they represent proper deductions under the average life method but not under the composite life method. In reality, the amount of statistical data necessary to make possible determination of loss upon retirement of specific assets is probably as costly to ascertain as would be the keeping of detailed plant records showing the life history of each unit of plant.

Assume that a plant consists of three items costing, respectively, \$1,200, \$800, and \$400, and having useful lives of 8, 6 and 10 years, respectively. The composite life is found as follows:

Cost		*Life in Years*		*Annual Depreciation*
\$1,200	÷	8	=	\$150
800	÷	6	=	133.33
400	÷	10	=	40
\$2,400				\$323.33

\$323.33 ÷ \$2,400 = 13.47 + %
\$2,400 ÷ \$323.33 = 7.42 + years.

Whereas it is theoretically possible to use the average life as a basis for computing depreciation (allowing, theoretically, for losses at time of abandonment) and possible also to use composite life (not allowing for abandonment losses), it is believed that, as a rule, practical difficulties render both methods undesirable.

Nothing said here is meant to question the validity of the practice of classifying plant into homogeneous groups, the items in each group naturally possessing practically equal lives. This plan, however, represents a radical departure from the use of average or composite rates.

Rates Based on Maximum Life. Sometimes when two or more assets are carried in one account, the practice is followed of basing the depreciation rate on the longest lived asset. Under this plan it is obviously correct to deduct abandonment losses (if they can be ascertained) and this is the stand taken by the Treasury. Mimeograph 4170 states that the loss upon retirement of an asset is allowable "in single item accounts or in classified accounts where it is the consistent practice of the taxpayer to base the rate of depreciation on the expected life of the longest-lived asset contained in the account."

In this connection it should be noted that merely keeping an individual card record whereon is computed the depreciation for the piece of equipment in question but where, for general accounting purposes, the rate of depreciation is based on the average life of a number of units, does not meet the above requirement of Mimeograph 4170.

A comparison of results secured by basing depreciation on the expected life of the longest-lived asset and allowing losses at date of retirement and those secured by depreciating each component over its useful life is illustrated below on the assumption that a plant consists of the following units:[5]

Years of Life	*Cost*
25	\$10,000
20	10,000
15	15,000
12	24,000
10	25,000
8	16,000
	\$100,000

Assuming that replacements are made of the shorter-lived items as retirements occur, the results, over a twenty-five year period, are as shown below. In the first column is

[5] Adapted from Ochis, M., "Depreciation for Income Tax Purposes," *L. R. B. & M. Journal*, May, 1937, pp. 4–5.

shown accumulated depreciation at 4% (which rate is based on the maximum life of 25 years) plus losses occurring at date of retirement of items having a life of less than twenty-five years. In the second column is shown the accumulation of depreciation ascertained by depreciating each item of plant over its useful life.

Cumulated Depreciation Allowances

End of Year	*Depreciation at 4% (Maximum life), Plus Losses on Retirements*	*Depreciation Computed by Depreciating Each Component Over Its Useful Life*	*Cumulated Deficiency of Maximum Life Basis*
1	$4,000	$8,400	$4,400
2	8,000	16,800	8,800
3	12,000	25,200	13,200
4	16,000	33,600	17,600
5	20,000	42,000	22,000
6	24,000	50,400	26,400
7	28,000	58,800	30,800
8	42,880	67,200	24,320
9	46,880	75,600	28,720
10	65,880	84,000	18,120
11	69,880	92,400	22,520
12	86,360	100,800	14,440
13	90,360	109,200	18,840
14	94,360	117,600	23,240
15	104,360	126,000	21,640
16	119,240	134,400	15,160
17	123,240	142,800	19,560
18	127,240	151,200	23,960
19	131,240	159,600	28,360
20	152,240	168,000	15,760
21	156,240	176,400	20,160
22	160,240	184,800	24,560
23	164,240	193,200	28,960
24	187,600	201,600	14,000
25	191,600	210,000	18,400

Examination of the last column makes evident the extent to which the procedure of depreciating all items on the maximum life basis causes the cumulated allowance to fall short of the cumulated allowance obtained by depreciating each item of plant on the basis of its useful life. The discrepancy is sufficient to warrant questioning the validity of the plan of basing the depreciation charge on the longest-lived asset. It is conceivable that this might be so far out of line with the lives of most of the other assets as to render the computation of depreciation on this basis of doubtful propriety.

Rates Based on Ratio of Retirements to Investment. In case of a seasoned plant which is not growing the ratio of average retirements to average investment is the depreciation rate. However, in case of a growing plant the retirement ratio is lower than the depreciation rate. This is also true of a new plant in which accruing depreciation exceeds the amount of retirements. The plan is subject to various mathematical refinements to allow for growth, but it is doubtful whether it can be made the basis of a plan for writing off depreciation in a given enterprise. The plan is used by the Treasury as a means of checking depreciation deductions claimed by taxpayers.

ACCOUNTING AND THE S. E. C.

Arrangements with the Securities and Exchange Commission have been made whereby the Accounting Review will be supplied from time to time with cases of accounting theory and practice. These cases consist of points on which the Commission's staff has rendered decisions. It is understood that these decisions do not establish precedents which the Commission is to follow blindly in the future; their importance lies in the type of reasoning which the Commission tends to follow and in the ultimate influence which it may have on accounting procedure.

Following are six selected cases. The names of the corporations involved have been omitted, but they may be obtained upon request from the Editor of the Review:

1. A public utility, by the restatement of its capital stock, created capital surplus in the amount of \$4,340,650.00, against which the following charges were made:

Addition to retirement reserve to cover deficiencies in the provisions for retirements, renewals, and replacements of electric properties	\$1,300,000.00
Abandoned properties charged off	944,361.87
Advances to affiliates charged off as worthless	142,303.30
Discount and expense of preferred stock sales charged off	252,107.47
Total	\$2,638,772.64

As originally filed the independent accountants did not comment upon the propriety of charging the foregoing items to capital surplus. After review by the Commission's staff the accountants' certificate was amended by the inclusion therein of the following paragraph:

"At December 31, 1932, the Common Capital Stock was restated and certain charges that should have been charged to Earnings or Earned Surplus prior thereto were charged to the Capital Surplus resulting therefrom. To the extent Consolidated Earned Surplus was available at that date, namely, \$318,296.46, these items should have been charged thereto and the balance shown in Earned Surplus thereafter correspondingly reduced."

2. The balance sheet of a public utility bore no indication that surplus was restricted to the extent that the company had reacquired some of its capital stock which was held in its treasury. Pursuant to a memorandum of deficiencies, this fact was disclosed by a change in the balance sheet whereby Surplus was designated as follows:

"Earned Surplus (including \$134,820 invested in 1498 shares of reacquired Preferred Stock held in treasury)—Schedule VII—\$224,802.65."

3. A consolidated profit-and-loss statement included as an item of income profit on the sale of the parent-company's stock. This stock had been sold by a wholly owned subsidiary. As a result of the opinion of the Commission's staff that this treatment was not in accordance with accepted accounting practice, the statement was amended to reflect this profit as a credit to capital surplus.

4. A distilling company declared a dividend payable in whisky. As at the time of the declaration, the outstanding stock was held by six persons.

The cost to the corporation of this whisky was \$73,760.48. The whisky thus distributed was thereupon transferred back to the company at its market value, viz., \$105,281.91, in payment for 45,000 shares of new common stock at 50¢ par value per share, which value was placed on the books, resulting in capital surplus of \$82,781.91.

The Commission's staff considered it improper to write up the company's inventory to an amount which did not allow for the realization of normal selling expenses and profit on its sale.

Pursuant to a letter of deficiencies, the value at which the whisky had been placed on the books was reduced to original cost to the corporation and capital surplus was correspondingly reduced.

5. The accountant's certificate filed in connection with the registration statement of a manufacturing company contained the following paragraph:

"All ascertainable liabilities have been included with the exception of a liability for Supplies, etc., which were in transit, or which had been received but not carried into Inventory in accordance with the Company's consistent method of accounting."

The items involved were composed of materials, new equipment in course of installation, and mill and office supplies. At the suggestion of the Commission's staff, the amounts of these items and the liabilities with respect thereto were set upon on the balance sheet and the foregoing paragraph was eliminated from the accountant's certificate.

6. The balance sheet of a public utility, as

originally filed, showed the capitalization of the company in the following manner:

Capital Stock (see Item 10-A of registration statement):	
7% preferred, cumulative; $100 par; pari passu with $6 preferred; authorized and outstanding, 30,000 shares.......	
$6 preferred, cumulative; no par (entitled upon liquidation to $100 per share); pari passu with 7% preferred; authorized, 60,000 shares; issued and outstanding, 20,000 shares.......	$15,020,000.00
Common, no par; authorized, 600,000 shares; issued and outstanding, 500,000 shares.......................	

Pursuant to the suggestion of the Commission's staff that the stated capital be appropriately segregated as between classes, the capital-stock section of the balance sheet was amended to show the following:

"Capital Stock (See Item 10-A of registration statement):		
7% preferred, cumulative; $100 par; pari passu with $6 preferred; authorized and outstanding, 30,000 shares..............................	$3,000,000.00	
$6 preferred, cumulative; no par (entitled upon liquidation to $100 per share); pari passu with 7% preferred; authorized, 60,000 shares; issued and outstanding, 20,000 shares....................................	2,020,000.00	
Common, no par; authorized, 600,000 shares; issued and outstanding, 500,000 shares...	10,000,000.00	
Total Capital stock..		$15,020.00

tificate should contain any reference to such omissions had been a debated point until the present standard form of certificate came into common use several years ago. In the standard form is this recital: "In our opinion . . . [the accompanying financial statements] fairly present, in accordance with accepted principles of accounting . . . " The Securities and Exchange Commission quite properly insists that if a violation of accounting principles exists in the financial statements, present custom by inference demands a qualified certificate. Mere disclosure here is insufficient; for the practices followed on the books of the company might have been defended under certain conditions. Even had the standard form of certificate not been used, the demand for qualification would have been fully justified.

As might be expected, a majority of the situations deal with surplus; one case affected balance-sheet totals and another resulted in the adjustment of profits. All the cases but one are concerned with net-worth classification.

That net-worth problems should constitute so large a proportion of registration cases is not surprising. The statement of investor relationships must not only satisfy the management; it must be an informative presentation from the point of view of the banker, the attorney, and the financial analyst. Nowhere on the balance sheet are the problems of classification and clarity more important; nowhere is there less agreement among authorities—as these cases testify.

In the first case, the public accountants who certified to the financial exhibits omitted to state in their certificate that improper methods of accounting had been followed by their client. Whether the certificate should contain any reference to such omissions had been a debated point until the present standard form of certificate came into common use several years ago.

This first case raises the ever-recurring questions of "charges to surplus." Some of the items of losses and expenses may pertain to valuations of properties acquired at an earlier date in exchange for capital stock. These valuations at the time the properties first appeared in the accounts may have been overstated because of the failure to recognize obsolescence or (the properties being those of a public utility) to accrue anything more than annual provisions for retirements. Had this been the situation, however, the public accountants, in revising their certificate, probably would have said so. It is more likely that the laches in account-keeping arose during the present company's existence. From the standpoint of good account-keeping the issue is not only that earned surplus should first have been exhausted but also that the earnings statements over the appropriate number of years should have been revised downwards. In terms of relative importance it would have been equally de-

sirable to have referred to the income statement also. Apparently the Commission did not feel that it could go so far. The qualification in the accountants' certificate was probably deemed to be sufficient to put the investor on his guard.

Public accounting is not yet sufficiently developed to make it possible for the practitioner to demand that his client follow accepted standards; at least practitioners so claim. In the uniform certificate, the public accountant announces merely that he has "made an examination" of the financial statements. That this is a fiction is well known to the public accountant; actually, he audits the books and prepares the financial statements, employing his own terminology and giving expression to his own ideas of grouping and classification. With a little moral courage added (and the Commission would gladly back him if it could) he would adjust the accounts to his own liking. In practice, that courage is usually exerted and adjustments are made when they are necessary. But it is the exceptional case that has given rise to the rule. What is to be done with a client who protests vigorously against the adjustment of its accounts? If worst comes to worst, another public accountant can be found who is not so exacting. How can a public accountant who is thoughtful of his future do otherwise than to cast his certificate into so pliant a mold?

In passing, a question may be raised as to the practical result of the certificate amendment. The effect of the amendment is to give the impression of saying to the reader, "What appears in the accompanying balance sheet as earned surplus is not really earned surplus, but a crotchet of the management. We are unable to convince the management of its error and so we have to set the facts before you in order that you may draw such conclusions as you may think proper . . . The relationship of the accountant with his client does not extend so far as to require the client to tell all the truth."

The second case brings out the necessity of disclosing the availability of earned surplus for dividends. The Commission found that more than half was restricted because of the purchase of treasury stock that had not yet been resold or canceled. Many practicing accountants still fail to disclose such restrictions despite the frequent discussions that have appeared.[1]

As amended by the public accountants the explanatory material added to the earned-surplus caption fails to indicate clearly that a restriction exists on the portion "invested" in the treasury stock whereby no dividends can be paid from such portion pending the resale or cancellation of the stock. The use of the term "invested" may also be questioned. No part of the balance-sheet equities, from the financial point of view, can be so exactly matched against a cash outlay. Furthermore, the transaction is of the liquidating variety since it represents a return of capital to a group of stockholders; no asset has been "invested" in. It would have been better to have used a more precise terminology in order to reflect the purely legal nature of the reservation.

A sale by a wholly owned subsidiary of its parent's stock, the subject matter of the third case, yields no profit if disposed of at a price greater than its cost. The investor to whom the stock was sold has reason to believe that his contribution has been applied entirely to capital account, that payment to a wholly owned subsidiary is an effective payment to the parent. From the point of view of the outsider only legal fiction separates the two corporations. The relationship is so close as to amount almost to an identity. Accountants habitually overlook the fiction and cast out profits that would be recorded as ordinary arm's-length transactions were the corporations not so related.

It is believed that a majority of accountants would hold that in the first instance the gain from the sale of the stock should have been credited to the paid-in-surplus account of the subsidiary, the reason being that a stockholder of the parent company (perhaps constructively, the parent company itself)

[1] For example, see the ACCOUNTING REVIEW for December, 1933, p. 333.

has made a contribution of capital to it. The commission did not go so far; it suggested only that in the consolidated balance sheet the gain be classified as capital (i.e., paid-in) surplus.

The fourth case vividly illustrates the dubious processes that promoters of a few corporations are willing to sponsor in order to boost balance-sheet valuations. Because of the identity of the parties at interest, the two transactions—"payment" of the dividend and "sale" of the stock—should have been looked upon by the public accountants who certified to the original financial statements as but one: the capitalization of earned surplus by the payment of what was equivalent to a stock dividend, in an amount representing the higher of par or market value. In the instance cited, the par value was 50 cents per share; whether the market at the time the capital stock was issued amounted to more or less than par does not appear.

According to the details displayed in the sixth case, the proceeds of the sale of the three classes of capital stock had never been separated. The 7%-preferred had a par value of $100, the other classes had no-par value. Separation by classes would seem to be an elementary accounting requirement, yet this case, like the preceding ones, demonstrates how frequently the simplest principles are violated in practice.

A few accountants will be found who will quarrel with the Commission on these decisions; the great majority, however, will applaud the Commission for upholding established principles.

In the December issue—

A new feature will be added to the ACCOUNTING REVIEW:

Professional Examinations
A department for students of accounting

This department will be conducted by Henry T. Chamberlain, Professor of Accounting and Dean of the School of Commerce at Loyola University, Chicago.

There will be problems and questions which have appeared in recent examinations, together with their solutions and answers; discussions of the points involved in individual problems; suggestions to students on the preparation of solutions, qualifications needed in particular instances, and what to do about alternative answers. It is recognized by teachers of accounting that the technique of the examination room offers obstacles that the majority of students, even the best students, have great difficulty in surmounting.

Professor Chamberlain's successful experience in conducting CPA-review courses in Chicago will be focused in this department, and its contents should be of the greatest interest to students and teachers, and to examining boards as well.

THE ACCOUNTING EXCHANGE

Accounting Theses: a List Compiled

by A. C. Littleton

Theses Accepted for the Ph.D. Degree, Year Ended June, 1937:

Accounting Theories Underlying the Balance Sheet, John Arch White, *University of Texas.*

Bank Accounting Practice, Lloyd H. Langston, *Columbia University.*

The Industrial Budget, Harry O. Boord, *University of Pittsburgh.*

Ph.D. Theses in Progress as of June, 1937:

Accounting for Arkansas Counties, Pearl Green, *University of Arkansas.*

Accounting for Corpus and its Income, Lawrence Sherritt, *Columbia University.*

Accounting for Savings Banks, Doris W. Bellamy, *Boston University.*

Some Aspects of Accounting for Surplus, Walter B. MacFarland, *Stanford University.*

Commission Regulation of Public Utility Depreciation, Perry Mason, *University of Michigan.*

Consolidated Statements, Theodore Lang, *Columbia University.*

Control of Corporate Financial Practice Through State Statutes, Norbert G. Bausch, *University of Illinois.*

Devaluation and Appreciation of Fixed Corporate Plant From the Standpoint of Accounting, Winfield Scott Briggs, *Columbia University.*

Economic Problems of the Obsolescence of Fixed Capital, Cecil A. Moyer, *University of Illinois.*

Federal Bankruptcy Act, Section 77B, Benjamin A. Gredinger, *Columbia University.*

Fixed Asset Accounting, Harold G. Avery, *Columbia University.*

Internal Auditing Policy, Victor Brink, *Columbia University.*

An Interpretation of Conflicts in Accounting Theory, Lee L. Johnson, *University of Missouri*

Municipal Electric Utility Accounting, Robert Ellsworth Walden, *State University of Iowa.*

Origins of Double Entry, Edward Peragallo, *Columbia University.*

Problems of Depreciation in the Management of Business Enterprises, George J. Philpott, *Boston University.*

The Role of Accounting in Economic Planning, John W. Myer, *Columbia University.*

The Sales Budget—Its Preparation and Use as an Instrument of Control, R. Parker Eastwood, *Columbia University.*

Standard Costs and Budgets, Gould Leach Harris, *Columbia University.*

Stock Dividends: Legal, Financial, Economic, and Accounting Aspects, Harry D. Kerrigan, *Northwestern University.*

The Theory of Cost Accounting, John W. McMahan, *University of Illinois.*

Theory and Practice of Standard Costs, J. Knight Allen, *Stanford University.*

A Uniform Accounting System for Counties in Kentucky, F. L. Phillips, *University of Kentucky.*

The Use of Variable Budgets in Controlling Accounting Expense, Cecil Lloyd Burrill, *Harvard Graduate School of Business Administration.*

The Utilization of Corporate Earnings, 1921–1936, O. J. Curry, *University of Michigan.*

Master's Theses Completed, Year Ended June, 1937:

An Accounting of an Advertising and Commission Agency in Shanghai, Wen-Hwei Chen, *New York University.*

Accounting for Good-Will in Partnership, Harris Cohen, *College of the City of New York.*

Accounting for Joint-Cost in Form of Salesmen's Salaries and Expenses, John F. Williams, *New York University.*

Accounting for the Newspaper Representative, Cecelia Dickoff, *Columbia University.*

Accounting for Paving and Excavating Contractors, George W. Collins, *Northwestern University.*

Accounting in Probate Procedure in Wisconsin, Mabel Snoeyenbos, *State University of Iowa.*

Accounting Procedure and Problems of a General Construction Contracting Company, Orval Francis Yarger, *Northwestern University.*

Accounting for Public Works Contracts, State of Illinois Division of Highways, Joseph Morrison Seaman, *State University of Iowa.*

The Accounting System of the Illinois State Penitentiary—A Case Study, James Cecil Snapp, *Northwestern University.*

Accounting for Taxicab Operation, Edward Ritch, Jr., *Columbia University.*

Accounting for Unemployment Insurance and Old-Age Pensions, Ernest Leins, *Columbia University.*

Accounting Systems for Institutions of Higher Learning, Q. M. Spradling, *University of Oklahoma.*

An Analysis of Factors Involved in Establishing Ground Floor Retail Rental Values of Locations in the Central Business District of Eugene, Huish F. Yates, *University of Oregon*.

Some Aspects of Accounting Procedure as Practiced by Investment Trusts, Robert Kappauf, *Columbia University*.

Asset Write-Downs of Industrial Corporations, 1929–1935, Mary Elizabeth Lancaster, *University of Pittsburgh*.

Bond Values and Accounting for Bond Investments, Darrell K. Seltsam, *University of Missouri*.

Books of Account as Evidence in New York State, Louis J. Carissimi, *New York University*.

Building and Loan Associations in New Jersey Today, Robert H. Arena, *New York University*.

Calculating and Tabulating Machines as an Aid to the Accountant, Herbert A. Brown, *Columbia University*.

The City of New York Accounting for Administrative Purchases, Sidney E. Mark, *College of the City of New York*.

A Comparative Study of Certain Features of State Income Tax Laws, Preston Whitcomb Kimball, *University of Illinois*.

A Comparative Analysis of State Individual Income Tax Laws from an Accounting Viewpoint, Leon C. Decker, *University of Pennsylvania*.

Contingent Liabilities, Harry E. Hawthorne, *Louisiana State University*.

The Contribution to Overhead Theory in Distribution Cost Allocation, Emery Gaythor Rutherford, *University of Illinois*.

Corporate Distributions in the Light of Some Capital and Income Concepts, Kermit J. Berylson, *College of the City of New York*.

A Cost Accounting System for a Lumber Mill, Willis Hampton Guinn, *Northwestern University*.

Cost Analysis in Connection with Personal Trust Accounts, Daniel Crowely, *Columbia University*.

The Cost Approach to the Study of Bookkeeping and Accounting, R. H. Eaton, *University of North Dakota*.

Cost Practices in Oil Refining, Edward J. Roach, *New York University*.

Cost Studies in Commercial Banks, Arthur Goldberg, *New York University*

Costing for Refineries in the Petroleum Industry, Vera Hatcher, *University of Oklahoma*.

Court Decisions and their Effect upon the Receivers of Land Estates, Incorporated, and Liberadar Holding Corporation, Subsidiary Companies of New York Title and Mortgage Company, Bernard B. Finnan, *New York University*.

A Critical Survey of the Facilities Available to the Public Accountant for Insuring Him Against the Financial Contingencies Resulting from Negligence, Omission, or Error in the Conduct of Professional Work, Paul E. Brodrick, *University of Pennsylvania*.

Current Assets—A Case Study of Balance Sheets in Prospectuses and Annual Reports to Stockholders, Walter James Wall, *Northwestern University*.

Deferred Credits, Marcel N. Broussard, *Louisiana State University*.

Depreciation Policies—A Study of the Contention that Corporations in General are Ultraconservative in Their Depreciation Policies, Samuel Orville Walthall, *Northwestern University*.

Development of Municipal Accounting in Oklahoma and Some Recommendations, J. W. Huff, *University of Oklahoma*.

Differential Costs, Henry Harry Shapiro, *New York University*.

Economic Value of Trade Associations, William Swedlow, *New York University*.

The Effect of Federal Securities Legislation Upon the Accountant, Heimie Edward Breen, *University of Illinois*.

Effect on the New Worth Section of the Balance Sheet of Some Selected States Corporation Statutes, Charles John Gaa, *University of Illinois*.

The Effect of the Revenue Act of 1936 on the Financial Policies of Corporations, Harry N. Garman, *Indiana University*.

Evolution of the Cost of Production Concepts in Accounting, Raymond Wei Yong Hsu, *University of Illinois*.

Federal and State Legislation Affecting Accounting Practice, Charles Augustus McDonald, *University of Illinois*.

Finance Companies, Joseph A. Schwarz, *New York University*.

Financial and Accounting Procedure of the United States Customs Service, Kuan Li Chia, *Columbia University*.

Financing and Accounting in Real Estate (Development), D. Bernard Loria, *New York University*.

Foreign Exchange Accounting, William L. Carroll, *New York University*.

Fraud in Bankruptcy, Victor J. Schaeffner, *New York University*.

A History of Accounting, Arsene Bekaert, *Columbia University*.

The History and Development of the Provision in Federal Income Tax Laws Relating to the Taxation of Capital Gains and Losses, Ivan William Clements, *Northwestern University*.

History of Trade Associations, Edward J. Cribbin, *New York University*.

Internal Check, William R. Bonthron, *New York University*.

Legal and Accounting Aspects of the Federal Social Security Act and the New York State Unemployment Insurance Law, Hyman Belkin, *College of the City of New York*.

Some Legal Conclusions Concerning Accepted Accounting Principles as Determined by Decisions of the United States Supreme Court and the United States Board of Tax Appeals Based on Cases Under the Federal Income Tax Law, Roger A. Hardy, *Boston University*.

Legal and Financial Phases of the Reorganization of Industrial Corporations, John Elton Hodges, *University of Texas*.

Liability of the Parent Company Through the Subsidiary, Fred Sandler, *New York University*.

Material Control and its Application to Various Industries, Arthur F. Cadorine, *New York University*.

Merchandise Accounting for the Telephone Equipment Industry, Robert Gitzen, *Columbia University*.

Some Methods of Credit Analysis, Ellis Levi, *Columbia University*.

Mortgage Loan Plans of New Jersey Building and Loan Associations and the Accounting Problem of Each Plan, Raymond R. Campbell, *University of Pennsylvania*.

Motor Carrier Act—1935, John O'Brien Clarke, *New York University*.

The Preparation of Cost Reports for the Use of the Executives, Poo-Ren Liu, *University of Illinois*.

Principal vs. Income; Interest of Life Tenant and Remainderman, Joseph P. Bilgren, *New York University*.

Professional Schools and Standards for Admission to Public Practice, Frederick Eustace Brown, *University of Illinois*.

Problems of Inventory Valuation, Arthur L. Ley, *New York University*.

Section 77B—Corporate Reorganizations, Charles S. Kaufman, *New York University*.

The Segregation of Principal and Income of Trust Estates, Howard Edmond Green, *University of Oregon*.

Study of Accounting for Building and Loan Associations, Howard Meseroll, *Columbia University*.

Theory of Interpretation of Financial Statements, Ching-Hai Chi, *University of Illinois*.

Treasury Stock, Wayne R. Roane, *Louisiana State University*.

Uniform Financial Accounting and Procedure for Illinois School Districts to Correlate With Latest State and Federal Advices, Alfred Selmer Odegard, *Northwestern University*.

Value and Cost as Balance Sheet Concepts, Burton R. Risinger, *Louisiana State University*.

Value of Intangible Fixed Assets as Affected by Public Utility Rate Cases, George A. Schwarz, *Columbia University*.

The Work of Accounting Societies and Others to Standardize Accounting Terms, George J. Nowak, *University of Pennsylvania*.

Objective Tests in Accounting

Definition

The *objective* test in accounting is a test designed to cover a large amount of material, to have a large number of questions requiring very brief answers, the answer to each unit being the same for every student who answers the questions correctly. This kind of test has in recent years been referred to as the *New Type Test* but since its use has been so commonly adapted it seems best to the writer to refer to it, not as a new type test, but as an objective test.

Necessity for Objective Test

In Indiana University the increased enrollment in accounting, without a corresponding budget increase, has necessitated some means of measuring student achievement with a minimum of clerical effort. Our staff has regularly felt that the instructor's real service to the student comes from adequate preparation and presentation of materials rather than in the type of drudgery that accompanies long hours in marking papers. Our institution requires that we give each student a letter grade each semester and the objective test furnishes the measuring device for arriving at the correct grade.

Advantages of the Objective Test

The advantages of the objective test may be briefly outlined as follows: (1) Much more material can be covered in this type of test. The tests are arranged so that the student

does a minimum amount of writing; often a mark, a letter, or a figure is all that is required to indicate the correct answer. (2) Much time is saved in grading. The questions are arranged so that only a correct answer will be accepted. A marking key can be prepared in advance which can be followed with exactness in correcting the paper. (3) A fairer result is assured to every student. The answers are so objective that even a person not trained in accounting can grade the paper fairly. Subjective guessing is eliminated; beautiful penmanship cannot enter to give the student possessed of such skill any advantage over the majority of his classmates; correct answers are the only thing that enter into the grading.

Criticisms of the Objective Test

(1) One of the first criticisms is that they are difficult to prepare. Experience will overcome this difficulty; the studying of some standardized tests that are on the market commercially will assist the novice in preparing the tests. (2) Students think the tests are easy; we have been able to convince our students, after their first test, that the objective test is not easier than the older, subjective type of tests. (3) Students can guess at the answer. Careful preparation of the tests eliminates the element of guessing; statistical penalizing of the *guess* will also serve to eliminate this criticism. (4) This type of test does not meet the practical business situation. The writer will agree with this criticism but will not admit that it is even remotely serious. The purpose of the test determines the validity of the type test used. If the test is for the purpose of checking on student achievement (and this is what we use the test for) the test period should not be considered as a learning situation but rather a measuring situation on the effectiveness with which the student has reacted to the previous teaching.

Types of Tests

The following examples will illustrate some of the various types of objective tests.

(1) *True-False* (Place a T or F in front of the statement, depending on whether it is true or false.)

F a. Under normal conditions assets and expenses will have credit balances.

F b. The salary received by a state employee is taxable by the Federal government.

The true-false type of test is perhaps the least desirable of the objective tests because it is difficult to prepare the statements so that they are not ambiguous or do not admit of guessing. These tests will have to be continuously re-worked in order to be effective.

(2) *Fill-In-Type* (Write the correct answer in the blanks provided.)

a. Assets amount to $8000, liabilities are $3000; net worth at the beginning of the period was $4000; assuming that the change in net worth was due to profit what was the amount of the profit for the period? a. $1000

b. Assets at the end of the year were $10,000; liabilities were $3000; net worth at the beginning of the year was $5000. On July 1 $1000 was put into the business as additional investment. What was the profit for the year? b. $1000

This type of test has unlimited possibilities as to variety in questions asked and as to the amount of reasoning that will be required on the part of the student.

(3) *Enumeration Test* (Write the answers in the blanks provided.)

a. Name the 5 principal classes of accounts.
1. ________
2. ________
3. ________
4. ________
5. ________

b. Name the classes of accounts that normally have credit balances.
1. ________
2. ________
3. ________

This type of test is valuable as a memory test and is adaptable to that part of any course which calls for memorization of facts.

(4) *Multiple choice* (Place an x before the number in front of the best answer.)

a. John Jones, grocer, bought an electric refrigerator paying $800 cash for it. The account to be debited should be:
1. Cash
x 2. Equipment (asset)

3. Advertising Expense
4. Refrigeration Expense

b. Cash sales for the day amounted to $500. Assuming that the business has a variety of journals, in which journal would you record the cash sales.
1. Sales Journal
2. General Journal
x 3. Cash Receipts Journal
4. Cash Payments Journal

The multiple-choice test should have at least three and preferably four possible answers. This type of test really brings out the reasoning powers of the students.

(5) *Other types of tests*

There are many other types of objective tests variously listed as matching tests; objective journal-entry tests; and completion tests (certain important words are omitted from a sentence and the student fills in the blank).

Conclusions

The instructor who once starts this type of test will soon learn how to use each of these kinds of tests in variation. The greatest handicap any instructor will have will be his inhibitions toward change. When the objective test is understood and used scientifically it will be found to meet a very definite need. The brief illustrations given were mostly taken from elementary accounting. However, the same types and variations of these types may well be used in any advanced course.

GEOFFREY CARMICHAEL

TESTING THE TESTS

This paper is predicated on the assumption that the usefulness of its various forms of objective tests have been established in the field of college accounting courses beyond the need of further argument. It is the purpose of this paper to discuss certain procedures for further testing and improving such objective-type examinations.

The writer has observed that an objective-type examination which has been carefully drawn up probably does not contain any higher percentage of poor items than does a problem or essay type, but it so happens that in the typical objective examination the "boner" items stand out so that they can be spotted much more surely than unreliable items of the older type. If this observation is correct, it of course constitutes one more argument in favor of the objective-type examination.

The general technique here discussed has appeared in some of the education texts[1] for ten or fifteen years and has also been in use extensively by the Federal Civil Service Commission, but some of its implications do not seem to have been fully discussed, nor does it seem to have been developed as thoroughly as it deserves—certainly not in university accounting circles.

The basic process of marking, as it is usually given, may be outlined as follows: Having graded the examination, the papers are arranged in the order of the grades received and divided into the better or upper half and the poorer or lower half. An analysis is then made of each of the items showing how many times it was incorrectly answered by the students in each half of the class. If the item is "good," it will show more "wrongs" in the poorer half of the class than in the better half. If the item is answered wrongly with nearly the same frequency in both halves of the class, it is assumed to have very little discriminatory or sorting power, and to be worthless for test purposes.

Occasionally, as the writer humbly confesses from his own experience, an item will be so bad that the good students get it wrong more frequently than the poor ones. Items of the merely worthless variety as well as those having such inverse sorting power, should be amended if the reason for their failure can be detected, or should be entirely thrown out in subsequent examinations.

A sample form set up for this type of analysis is presented on the next page.

The analysis in this form indicates quite clearly the relative difficulty of the items as well as their discriminatory value. In the above exhibit, Item 1 is fairly easy (18 wrong out of 120), and quite discriminatory (5–13).

[1] A good example is Greene & Jorgensen *The Use and Interpretation of Elementary School Tests*, Longmans, 1935, pp. 140.

Item 2 is so easy as to be almost worthless. Item 3 is considerably harder than 1 and 2 and does not have much sorting power. Item 4 is passable, but Item 5 is absolutely vicious. Item 6 is the kind that approaches the ideal.

Objections to this simple form of validation are not difficult to find. Obviously we are judging the items in terms of the results (the students' grades in the test) which they themselves have helped to determine.[2]

Principles of Accounting I
Hour test on depreciation, November 17, 1936
Validation against test grades
120 examinees

Item #	Times wrong in upper 60	Times wrong in lower 60
1	5	13
2	1	3
3	13	22
4	8	17
5	30	21
6	3	15
7		

The most obvious answer to this objection is that the effect of the relatively few real "boner" items upon the actual grade is probably inconsequential. However, it is not necessary to rely upon this assumption. The writer has experimented extensively with validations similar in form to that above described, but using various other bases for the determination of the "upper half-lower half" division. One such basis was the final ranking of the students in the course in which the examination was given. Thus the criterion is much broader, taking in other tests, daily written work and recitations.

A still broader criterion, the students' scholastic standing in all previous work taken in the college, was also used in a third series of validations, just to see what results would be forthcoming.

The validations against all three of these criteria proved remarkably consistent. Those items which were distinctly good when validated against the examination grade itself, stood up under all three tests and none which were really poor in the first test turned out to be good in the others. The apparent *degree* of discriminatory value of the items decreases as the criterion is broadened, but their relative values stay substantially the same.

Essentially, these results simply point out that our whole grading system is fairly consistent, and unless we are willing to go so far as to question the reliability of the whole structure of grades, we may quite safely rely upon any part of it. Tentatively at least, we may conclude that a validation of the items of any reasonably long objective test against the grades given by that test itself is reliable enough for all practical purposes.

A second group of experiments made by the writer was based upon a second possible objection to the simple form of validation outlined above. It seemed to the writer that the sensitiveness of such a simple validation would be impaired by including a great number of students of the middle ranges of ability. It seemed that whether these students got an item right or wrong was of little consequence in judging the efficacy of that item in sorting out the students.

The obvious answer to this objection is to drop a considerable middle group of students and to proceed in the validation, using only the really good and the really poor students.

While it seemed reasonable that this expedient would produce a more sensitive test of the items, there was of course also the possibility that what was gained in sensitiveness would be lost in reliability, because

[2] Thus, if *all* the items in the test had inverse discriminatory value, all of the grades achieved by the students would be in the reverse order of their knowledge in the course, and all of the items would show up as having positive discriminatory value.

of the smaller number of examinees remaining in the validation.

To get a possible solution to this difficulty, a group of seven tests was run through a whole series of what we call, for want of a better term, our cumulative-step validations. Each test was validated: first, by using the papers of only the best ten and the poorest ten students; second, by using only the best 20 and the poorest 20; third, by using the best 30 and the poorest 30; and so forth. Since the class of students involved at this time numbered just over 100, the experiment can be thought of as having used the best 10% against the poorest 10% and so forth. We refer to these successive validations as doing "a 10–10 validation," a "20–20 validation" and so forth.

Once set up, the process is not forbiddingly complicated, falling easily within the ability range of our N.Y.A. helpers. The form used to make the actual analysis appears as follows:

As might have been expected in the above tabulation, the 10–10 validation shows a higher ratio between the "wrongs" of the lower and upper groups than does the 20–20 or any of the other validation steps. The 20–20 is more sensitive than the 30–30, and so forth.

Our problem now may be thought of with reference to the above form as: "How far toward the right do we have to go in order to have a reliable validation?"

Assuming that the *best* conclusions would be drawn after examining and comparing *all* of the steps in the validation, our problem would take this form: "How far to the right must we go to form the same judgment as we would form by examining all the steps?"

When the complete array of data for all seven tests in our experiment was examined with these questions in mind, it was found that the conclusions formed on examination of the 20–20 validation were fully mature,

Principles of Accounting II.
Hour Test on Corporations. January 30, 1937
Validation against test grades

Item	"Wrongs" in upper groups					"Wrongs" in lower Groups				
	1–10	11–20	21–30	31–40	41–50	41–50	31–40	21–30	11–20	1–10
1	2	5	8	11	17	30	25	19	16	8
2	1	4	7	9	12	12	10	9	5	3
3	0	0	1	1	2	6	6	4	3	3
4	4	7	12	16	21	13	10	9	7	2
5	0	1	1	1	3	15	14	12	10	7
6	1	2	2	2	4	16	13	11	7	5

In this form the numbers at the right of each space are put in (cumulative from the left and right toward the center) when the tallying has been completed.

A convenient form in which to report the results and to preserve them for reference was found to be:

in the sense that they never had to be changed, on inspection of the remaining validations.

The 10–10 validation was frequently misleading as in the case of Item 2 in the sample above, where we would have accepted the item as good had we not gone beyond the

Principles of Accounting II.
Hour test in Corporations, January 30, 1937
Validation against test grades

Item	10–10	20–20	30–30	40–40	50–50
1	2–8	5–16	8–19	11–25	17–30
2	1–3	4– 5	7– 9	9–10	12–12
3	0–3	0– 3	1– 4	1– 6	2– 6
4	4–2	7– 7	12– 9	16–10	21–13
5	0–7	1–10	1–12	1–14	3–15
6	1–5	2– 7	2–11	2–13	4–16

10–10. The 20–20, however, showed this item to be of rather low discriminatory value and would be cause for its exclusion.

Probably this whole process of reasoning and the 20–20 form of validation recommended, will appear as rather inexact, but it should be remembered that for the purpose in hand we do not need an exact determination of the relative values of the items of the test, but merely a feasible technique for spotting and throwing out the really objectionable items in our tests.

If these recommendations are to be followed, something like the form shown below would be effective for the whole task of validating and reporting any objective examination.

While additional experiment by others to further test this testing of the tests is certainly desirable, the writer feels justified in the tentative statement that a validation on the basis of the 20% extremes (a total 40% sample) against the criterion of the examination grade is simple and reliable and if consistently used, will be the means of greatly improving any form of objective type examination.

LEO A. SCHMIDT

Principles of Accounting II.
Final Exam—June, 1937
20–20 Validation against exam grades
108 Students in class.

Item	Wrongs in upper 20% (21 students)	Wrongs in lower 20% (21 students)	Remarks—Disposition
1	7	13	OK
2	0	2	Too easy-out
3	5	9	OK
4	12	18	Too hard-out
5	3	9	OK
6	7	4	Vicious-out
7	8	11	Ambiguous?
8	2	6	OK
9	3	8	OK

AMERICAN ACCOUNTING ASSOCIATION

TWENTY-SECOND ANNUAL CONVENTION

Atlantic City, New Jersey

December 27–8, 1937

Details of the convention program and announcement of the convention hotel will appear in the December issue of the REVIEW.

BOOK REVIEWS

The Economics of the Iron and Steel Industry, Volumes I and II. Carroll R. Daugherty, Melvin G. deChazran and Samuel S. Stratton. (New York: McGraw-Hill Book Company, 1937, Vol. I, xxxiii, 578 pp.; Vol. II, xviii, 609 pp. $12.)

In these two volumes the authors parade before the reader the mighty panorama of the steel industry. Financial support for this project was furnished by the Brookings Institution, the Falk Foundation of Pittsburgh, and the University of Pittsburgh. This is not mentioned to prejudice the reader; on the contrary, the work as a whole is remarkably free from bias. It is enough to review one's faith in our democratic institutions when one reflects that many of the facts and conclusions are anything but complimentary to the very interest of those who have financially supported the project.

The book is a study of the behavior of the steel industry under the NRA Code. With the invalidation of the NRA by the Supreme court, the inquiry assumed more of the character of a historical study involving an objective and constructive analysis of the results of an experiment in industrial self-government.

Dr. Daugherty's chapters deal with labor: first, with the precode labor conditions in the industry; later, with the labor provisions of the code; and in Part III with labor conditions under the code covering wage rates and earnings, laws of labor, employment, working and living conditions and collective bargaining.

Dr. deChazran, concerned mainly with distribution problems in the industry, includes a careful analysis of the basing-point system, and prices and pricing practices under the code. To Dr. Stratton we are indebted for an exposition of cost elements and earning ratios in the industry. Together they subject the iron and steel industry to careful scrutiny. The size of the work is impressive; there are 232 tables and 101 charts, yet despite the array of statistical material the writers lament: the paucity of data available. This is due not only to the fact that in many phases of the inquiry no data existed, but also to the consistent unwillingness of the industry to furnish information concerning matters of importance, e.g., statistics relating to costs of production.

The iron and steel industry is peculiarly susceptible to cyclical fluctuations as regards volume of production. The steel code was, therefore, concerned mainly with the elimination of secret price concessions and unfair practices in order to effect a measure of stabilization without detailed control of production or capacity (though the erection of new blast furnaces and new open hearth furnaces was prohibited). Hence, the authors have not hesitated to characterize the Steel Code as a bargain. The industry obtained an effective price stabilization "perhaps to the point of eliminating much that is commonly regarded as legitimate price competition, and it protects itself . . . against an overproduction of products that might threaten the smooth operation of that pricing method." This was its *quid pro quo* for the labor provisions granted under the NRA. Price stabilization was accomplished by a system of fines, and by extension of the basing point system of quoting delivered prices, though the original basing-point plan of the industry had been outlawed by the Federal Trade Commission as far back as 1924.

The authors criticize the industry severely for its efforts to prevent general knowledge of average cost ratios and their fluctuations. Although base prices under the Code were to consider the cost of manufacturing, neither the original nor the revised Code provided a definition or formula for manufacturing cost. Hence, conclusions regarding the effect of increased labor costs on the value of the product cannot be easily drawn. However, in the production of pig iron, labor costs played a minor role, representing in 1933 only 5.41% of the value of the products, while material costs and overhead and profit represented respectively 86.09% and 8.50%. Thus "a 10% increase in wage rates —would increase the value of the product by .54%, and if the increase could not be added to sales value, it would result in a decrease of 4.5% in the residual sum out of which overhead and profits must be met."

This leads directly to the next significant fact; namely, that the iron and steel industry thoughout the period covered by the study has shown a very modest rate of return on its capitalization (approximating 6.37%) even during the prosperous period from 1924 to 1929. Dr. Stratton finds no evidence that "the steel group has placed a higher valuation on its assets than have corporations in other industries . . . at least, if such inflation of assets exists, it does not appear in such items as goodwill and patents." And yet, we need shed no tears over the plight of the steel industry. It seems to this reviewer that a study of the history of the leading companies reveals considerable stock watering at their inception, that optimistic appraisals of assets did exist, and that upon a basis of actual value at time of acquisition, the rate of return would be materially increased. Furthermore, as Dr. Stratton correctly points out, "reserves for ore and coal for future operations may represent large investments on which no return can be earned currently."

To this must be added the fact that the industry is highly capitalized, and, the fixed charges make themselves felt and constitute a severe drain on earnings when the rate of output at the mills slows down. This seems to be borne out by the fact that "the semi-integrated and nonintegrated corporations experienced a higher rate of return on capital . . . ," than did the completely integrated corporations. Pricing policies of the industry bear out the conclusions of students of business cycles: that as one travels back through the channels of distribution from retailer to jobber and finally, to the manufacturer, one finds more violent volume fluctuations, but an increasingly rigid price structure which tends to resist the usual deflationary movements commonly associated with periods of contraction. Thus, in steel, "employment and the rate of production rather than price were made to vary with changes in demand."

The Steel Code was directly responsible for raising wage rates and earnings of workers in varying degrees, and the compliance of the industry with the Code's wage provisions was thorough. Hours of labor were reduced under the Code, and, except for loop-holes in the Code, the 12-hour day and the 7-day week were almost entirely eliminated. Here compliance was not as good as the industry's record with respect to wage provisions.

Dr. Daugherty on the subject of labor relations finds that a majority of plant workers were organizable by non-coercive methods in an industrial union but that the amalgamated association of iron, steel, and tin workers did not possess the necessary requisites for the job. Moreover, the companies themselves were disposed to retreat somewhat from their extreme paternalism, although they were adamant in their refusal to recognize outside unions or even the government labor boards. In view of the present sorry mess of labor relations, Dr. Daugherty's statement that "There was a definite, appreciable advance toward the practical, attainable objectives of labor or industrial democracy "seems rather optimistic."

Dr. deChazran's penetrating analysis of free competition in relation to steel, forces him to conclude with Dr. Stratton that free competition in steel would regenerate into price competition without regard to costs. Hence "a fair price for steel and the elimination of preventable social waste can be assured under private ownership only if some form of social control can be made effective." The authors conclude, however, that the anti-trust laws and the attitude of the Federal Trade Commission are inconsistent with the economics of the steel industry; furthermore, that the code disclosed vital weaknesses and hence could not be considered a medium for permanent control of the industry. But government regulations must be imposed, unless we wish to adopt alternatives in the form of government competition, or even government ownership. The authors, therefore, recommend as a first step the establishment of an impartial fact-finding commission, vested with authority to collect needed information, and to report its recommendations regarding a public policy to Congress.

Theodore Lang

New York University

Present Day Banking—1937. (Published by Banking, Journal of American Bankers Association. 1937, pp. xiv, 329.)

This is a collection of forty-nine articles by nearly as many different writers. The subjects are: the bankers' part in building an agricultural community; chartering of banks; loan administration policy; investment policy; budgetary and expense control; income from banking services; banking talks to schools and clubs; banking education and public relations; how one bank met its public relations problems; bank officers in school at forty; personal loan departments in banks; the place of F.H.A. mortgages in banks; preserving the association between banking and trust business; bank insurance and crime protection; utilization of research by the American Bankers Association; research on federal lending agencies; postal savings and bank chartering; research in costs and methods of operation; research in the trust fields.

A similar book was published last year. The present one is on the whole a worth-while discussion by bankmen of matters in which bank officers are interested. Three or four men discuss each of the subjects.

To this reviewer the most interesting article is on "Budgetary and Expense Control," by Arthur J. Linn, comptroller of Hamilton National Bank, Washington, D. C. His discussion of unit costs in particular is worth while.

It is difficult to see how this book can be of much interest except to bankers. This book is intended for them. It is to be recommended to bank officers who wish to know what other bank men are thinking on the subjects mentioned.

W. Granville Meader

Industrial Trust Company
Providence, Rhode Island

How to be a Good Foreman. Charles Reitell. (New York: Ronald Press Company, 1937, pp. xiii, 186. $1.50.)

How to be a Good Foreman is a small but useful book. It is useful because it will be found helpful in the training of good foremen and in making good foremen better. It reads easily, and once started, it is likely to be completed. In other words, it is inspirational in a practical worth-while way. It would make a good focal point for the activities of foremanship discussion groups.

The book is unique in that from first to last the author drives home the thesis that the foreman is a manager because the success or failure of his endeavors is measured in terms of the financial results of his activities. "A foreman to prove successful in modern industry must show:

1. A Mastery of the Human Elements,
2. A Grasp of Technical Requirements,
3. A Knowledge and Use of Costs and Budgetary Controls."

Emphasis is on the first and third of these three concepts, which form the basis of the organization of the book. Mastery of the human elements makes the foreman a leader and if he cannot lead, he fails. Many concrete do's and don'ts are suggested.

In the section on technical requirements, the emphasis is on understanding of the technical relations of the foreman's job to the other functions and functionaries within the plant. This approach is unusual and is good.

The third section of this book sets forth the financial concepts of the foreman's job. Mastery of these aspects is what makes a foreman a true manager rather than a technician. Standard costs and the flexible budget as means of measuring what is being accomplished against what should be accomplished are described and carefully illustrated. This last section is developed in such a way as to give the entire book unity and singleness of purpose.

The book has weaknesses. For while its concepts are so clearly set forth as to be readily grasped, the foreman

who is inexperienced in the use of standard costs and flexible budgets can hardly gain a working mastery of these devices from the 46 pages devoted thereto. But if used as a point of departure for group study and discussion, the treatment is excellent.

A much more questionable characteristic of the book is the inadequately supported stand the author takes on certain important matters of policy: high wages and "paternalistic" personnel leadership are examples. In most applications this reviewer would applaud the stand taken by the author. However, these are debated issues, and the superintendent who considers placing this volume in the hands of his foremen should make sure that he approves the unquestioned taking of such positions as are set forth.

Unfortunately the author avoids bringing that immediately important subject of collective bargaining before his readers. Admittedly, collective bargaining is a matter of major policy, but the execution of any policy of personnel relations is sure to fall heavily on foremen. A foremanship discussion program that fails to consider the daily avoidance of union friction and the fostering of good group working relations is definitely missing an opportunity.

How to be a Good Foreman is one of the best books of its kind that has come to the attention of this reader. It is an important book in that it satisfies a definite want and is timely.

FRANKLIN E. FOLTS

Harvard University
Graduate School of Business Administration

Money and Banking. Charles L. Prather, Ph.D. (Chicago: Business Publications, Inc., 1937, pp. xvi, 559. $3.75.)

What should be the contents of a textbook on money and banking, written for college students who have not studied the subjects before? This book was designed for that purpose, and the author gives his answer in his preface. He has included in our banking structure all lending companies, including the new lending agencies of the U. S. Government. In his chapters on money, he devotes much of his time to the New Deal experiments, and to the various theories on money now agitated.

The author has a right to his opinion. He leaves little doubt as to his belief that (a) the intrusion of government into banking is necessary and desirable, and on the whole likely to increase rather than to diminish; and (b) the gold standard was tried, found wanting, and an eventual return to a modified gold standard is probable. These are the matters the college student is to learn. It happens that this reviewer does not agree with most of this opinion.

As to the book's virtues, much can be said. In 543 pages the author has given a mass of material and a bird's-eye view of the field as he sees it. The information on our government's lending agencies is brought up to nearly the end of 1936, and is in convenient form for quick reference. In discussing various monetary theories he presents the arguments for and against. At the end of each chapter are questions which should provoke thinking by the student; many questions containing references to outside reading.

One's interest is aroused both by matters included (see above) and by matters excluded. In the chapter on "Foreign Banking Systems," five pages are given to the Reichsbank, with no attention to the Banque de France. One would have thought the latter more important to the student of banking today. In the discussion of English banking there is no mention of either the London money market, or of "advances" by English banks. It would be difficult for a student to have a just conception of English banking without some knowledge of both. In the (naturally) much more detailed statement of banking in the United States there is a brief mention of commercial paper, bankers acceptances, call loans and short-term Government bills, but there is no real presentation of the New York money market. To a bank man this matter is much more fundamental for an understanding of our banking system than, for example, "pawn brokers" to which a page is given (p. 490).

In spite of evident care, some errors are noted which will surely be corrected in a subsequent edition. Most are of small importance. For instance (p. 223) beyond doubt the author knows that cashier's checks and certified checks are liabilities of the bank *to the public*, not merely to other banks as the text reads. It is not so easy, however, to excuse the statement on page 212, "Good banking is the joint product of good laws and good bankers." Good banking is the product of good bankers. It is incredible that the laws could be so drawn as to produce good banking from bad bankers. Indeed, that would be contrary to the experience of several hundred years of banking. It is hard to reconcile the author's statement with his evident approval of English banking (pages 525, 526) which as he says is largely free from legal restrictions. Undoubtedly the author in this statement presents a view widely held in this country. It is nevertheless mistaken in the light of experience.

W. GRANVILLE MEADER

Industrial Trust Company
Providence, Rhode Island

Basic Accounting Principles. Earl A. Saliers and Arthur W. Holmes. (Chicago: Business Publications, Inc., 1937, pp. vi, 656. $4.00.)

This is an elementary book designed to acquaint the student with the essential principles of accounting and business procedure. It stresses fundamental theory as the basis for sound practice, but does not attempt to appraise practice through the use of illustrative exhibits from actual business.

The first section of the text, comprising ten chapters, is designed for a short, intensive course in bookkeeping theory. After a brief introductory chapter, the balance sheet and the statement of profit and loss are explained. The principles of double-entry are introduced as a part of the chapter on the account and the ledger. The remaining chapters of the first section cover completely such topics as the journal, the trial balance, adjusting entries, closing entries, and the worksheet. Alternative methods are explained and the student's attention is

specifically directed to those points which are fundamental or which are traditionally more difficult to grasp.

There are a number of the remaining twenty-three chapters which might be omitted by some instructors but which should prove valuable to those who teach accounting as a service course or as an introduction to the field of business. The inclusion of such topics as business organization and procedure, business instruments, law of partnerships, and law and organization of corporations give completeness to the book. Where flexibility is desired, these chapters may be omitted without impairing the orderly sequence of the course.

In keeping with the general objectives of the authors, there is little discussion of the more complex and controversial aspects of valuation principles, consolidated statements, bonds, statement analysis, etc. Yet all such topics, and others commonly found in books on accounting principles, are treated in a manner which should prove stimulating to the beginning student in the subject.

There are two short practice sets and an ample number of questions and problems to give adequate review and practice without undue repetition.

R. H. Robnett

Massachusetts Institute of Technology

Taxable Income. Roswell Magill. (New York: The Ronald Press Company, 1936, pp. ix, 437. $5.00.)

This book, which was prepared under a grant from the Columbia University Council for Research in the Social Sciences, is a thorough, carefully documented study of the development of concepts of taxable income in this country and abroad. The trends of Federal and State Income-Tax legislation are explained and judicial decisions interpreted. It is apparent that in some degree legal decisions on taxable income have been determined more by expediency than by consistent application of logical principles.

The first five chapters, comprising Part I, deal with "The Requirement of Realization." In this section the author distinguishes between economic and legal concepts of income. The legal concept requires realization, i.e., that the gain be separated from capital. In this connection, the author cites and discusses an imposing array of cases which illustrate the principles determining *whether* and *when* income has been realized.

Part II (4 chapters) is a discussion of "The Characteristics of Income." Consideration is given to such topics as "Money and Property," "Payment of Debts," "The Element of Control" and "Deductions from Gross Income." This section does much to clarify concepts of income and to explain the historical reasons for a number of deductions and exemptions from gross income in determining taxable income.

Section III (3 chapters) considers "Compensatory Payments" and "Gifts and Bequests." The book concludes with a chapter entitled "Toward a Concept of Taxable Income" in which is admirably summarized the author's previous discussion of the widely diverse viewpoints bearing upon today's concept of taxable income. His own concept of individual taxable income is stated as follows:

"The taxable income of an individual consists of (1) his total gross receipts during the period (other than gifts, bequests and devises), after subtracting its cost from the proceeds of any sale or other disposition of stock-in-trade or an investment, plus (2) any increase in his economic worth resulting from the discharge of his obligations.

1. Income so determined is considered to belong to the person who earned it, or who owned or controlled the investment which produced it.
2. The gross receipts of an individual include: (1) any item of money; and (2) any interests in property, having a money value, and differing in kind or in extent from those previously held by the recipient, which he has actually received, which he may obtain upon demand, or which have accrued during the period according to a recognized method of accounting employed in keeping his books.
3. Obligations for this purpose include not only one's debts, but recognized obligations to support and maintain one's family."

The book closes with the following pertinent statement:

"The conclusion of the whole matter is Mr. Justice Holmes' classic sentence: 'A word (and the word he was construing was 'income') is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used."

This study rewards careful reading. Dr. Magill modestly implies that he has made only a small beginning in the generalization of concepts. Most certainly he has succeeded in his avowed objective of a "detailed analysis and integration of the decisions and legislation of the field."

R. H. Robnett

Massachusetts Institute of Technology

Bank Accounting Practice. L. H. Langston. (New York: Ronald Press, 1937, pp. xiii, 532. $5.00.)

Dr. Langston is a teacher, consultant, and accountant with years of experience in various phases of banking practice. All these viewpoints were brought to bear with singularly effective results in the preparation of this volume.

In the introductory chapters the author stresses the peculiarities of bank accounting so that the student will understand that banks use fundamental accounting principles but apply to them certain emphases made necessary by the nature of the operating problems. The most important of these are summarized as follows:

"Regimentation of bookkeeping entries.
The proof system.
Two or more sets of entries covering the same transactions.
The accountability of operating departments.
The day as the unit of time in accounting.
The accrual system for earnings and expenses.

Accounting needs play a very important part in determining the plan of organizing an individual bank into operating departments."

The book may be classified informally into four sections. In the first group of two chapters, the author discusses in detail the general ledger account classification in addition to the introductory material mentioned above. This acquaints the reader with bank terminology and permits a better understanding of the latter parts of the book.

General-ledger control of credit instruments, loans, cash items, foreign-exchange transactions, trusts, savings accounts and income and expense items are given a thorough discussion in Chapters 3 through 9. Dr. Langston explains the nature of every typical transaction and in most cases illustrates the discussion with journal entries. The detailed explanation of the "block" or "batch" system should be particularly interesting to the student just acquainting himself with bank accounting methods.

Departmental and operating records are treated in the next part of the book (Chapters 10 through 22). Explanations of the flow of work through the bank, of the great emphasis placed on the principles of internal check, and of the various methods of originating and regimenting accounting entries are characteristic of these chapters which constitute more detailed treatment of the principles discussed in the earlier parts of the book. One chapter is devoted to an explanation of bookkeeping and proving techniques. In this chapter, as in others, Dr. Langston has avoided the error of describing a particular system or particular machine methods. The emphasis is properly on objectives and general examples of how those objectives may be attained.

Preparation and analysis of financial statements, and methods of internal audit and external examination are the subjects of the closing chapters. Bank-statement practice is discussed in terms of the requirements of the Federal agencies and, in the case of published statements, of public opinion. The reviewer is in complete agreement with the following statement of the author's views on the subject:

"While bank statements of condition are doubtlessly published frequently enough, there is a growing dissatisfaction on the part of the public, governmental and Federal reserve authorities, and the banks themselves over the content of published statements. Predictions are always hazardous, but it seems reasonably certain that the period which lies immediately ahead will see much accomplished in the direction of making published bank statements more informative and more readily understandable by the general public. Doubtlessly some of the progress that will be made will arise from changes in legal requirements, and some will come from voluntary action by banks themselves taken either singly or through association."

The final chapter on "Auditing and Examinations" is of particular value to those interested in the specific application of auditing principles to the problems of a bank.

This book is commended alike to the student of accounting and of banking. The author has avoided unnecessary detail but has succeeded in giving a clear picture of bank operating routine and the service rendered to that routine by accounting.

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Principles of Accounting, Revised Edition. A. L. Prickett and R. M. Mikesell. (New York: The Macmillan Company, 1937, pp. xiii, 519. $3.50.)

This is a revision of *Introduction to Accounting* written by the same authors and published in 1930. As a result of classroom test some of the material has been modified and some expanded. Additional material has been included in line with developments in accountancy and in accounting pedagogy since the earlier edition. In particular there is a considerable increase in illustrative and problem materials.

In keeping with the earlier edition the authors have not attempted a superficial coverage of a broad area but have limited the scope of the book and the material is covered thoroughly and well. Because of this the book is much more adapted to a first-year course in which it is assumed that the student will go on to further training in accountancy, than to a one-year survey course. It emphasizes the bookkeeping aspects of accountancy and by and large leaves the policy aspects to later courses.

It goes much further than the average text in explaining and illustrating step by step the various bookkeeping procedures. From the outset it should train the student to be thorough in his work and in view of the attention devoted to even minor details there should be no excuse for the slipshod work that is commonly experienced in first-year courses in accountancy. This aspect should also be of interest to many practitioners who not infrequently have deplored the apparent lack of adequate training in the fundamentals of bookkeeping procedure on the part of their junior accountants.

The book starts with the usual introduction on the need of business records and proceeds with a description of a balance sheet and of the accounting equation. A chapter is then devoted to the profit-and-loss statement, its various sections and supporting schedules. Considerable attention is next paid to accounts, account classification, and the effect of various accounting transactions on the accounts. After this groundwork the ledger and trial balance are described, during which care is taken to illustrate accounts as they appear in the ledger at various stages, and methods of setting up accounts, making entries, obtaining totals, making footings and drawing off a trial balance.

The journal is then described in detail, after which a summary is presented of the accounting process up to and including the trial balance. This summary includes the analysis of transactions, journalization, posting, and drawing off a trial balance and a problem is presented in which the student is required to work out all of these steps. Questions and short problems are provided at the close of each chapter prior to this summary.

The next chapter deals very ably with special journals and is followed by a chapter on interest, discount, and insurance. Although these latter topics are preliminary to the treatment of adjustments and hence may not be out of place, it would seem to the reviewer that the chapter on special journals might well be deferred until after the full treatment of the bookkeeping cycle, including the working sheet.

The chapter on adjusting entries is excellent and provides more detailed explanation than is commonly given. This is followed by a chapter on the working sheet, after which a complete treatment of closing and post-closing entries is presented. As a matter of opinion, the reviewer would prefer to teach the material on closing and post-closing entries prior to the working sheet. A more wholesome regard for the part that the working sheet plays may be instilled if the student is first taught the procedure for the bookkeeping cycle without resort to this device.

The next two chapters deal respectively with columnar journals and the voucher register. The chapter on special journals mentioned above might well have been placed between them.

A chapter is then devoted to business forms and vouchers and this material on the original evidence of transactions is more complete than is found in the average text. This is followed by a summary problem of some length involving as its sub-title states, "Instructions and transactions for the completion of a project involving all the common processes performed by the bookkeeper for a small business enterprise."

The remaining chapters deal with the accounting considerations involved in various types of business organization including agency, consignments, partnership, joint venture, joint-stock company, limited-partnership association, mining partnership, the corporation, a manufacturing business, and departmental accounting.

The book measures up to the high standards which have been set for texts in the area of accounting principles. It should prove pleasing to those who have used the earlier edition with success and should gain many new friends.

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International Monetary Issues. Charles R. Whittlesey. (New York: McGraw-Hill Book Company, Inc., 1937, pp. ix, 252.)

In speaking of this volume the author remarks, "The present book was begun as a study of the international aspects of money. It will appear to many, I suspect, to have turned out to be a tract against the gold standard. I hope, however, that it will not be viewed solely in this light." Again, he says, "It is the primary thesis of this book that the establishment of a 'final level' for exchange rates should never be attempted." Accordingly it may be assumed, if the thesis is established, that the book is more than an attack upon the gold standard.

In his "Introduction," in speaking of the exchange-equalization funds, Dr. Whittlesey refers to the temptation to use these funds not only to reduce short-run deviations from equilibrium rates of exchange, but also for the purpose of preventing long-run adjustments and he expresses the hope that "... this temptation be steadfastly resisted." He then asserts the central monetary issue of the day, "Should the world, or any country or group of countries, return to the gold standard at a fixed par of exchange?"

Passing to "The International Role of Money," he finds its primary role to be the facilitation of "... the adjustment of price levels between countries." It is believed that the gold standard cannot be made to function "... successfully as the automatic regulator of national and international price relationships ..." since there is not the slightest prospect of eliminating the elements of insecurity in that standard. Moreover, experience with gold as compared to paper standards is considered more favorable to the latter than to the former.

In Chapter III, "The Automatic Character of the Gold Standard," the relative merits of gold and paper currencies are further considered and the author there takes the view that "... under the same assumptions free exchange rates would also produce automatic adjustments of international price levels" (p. 56). Indeed, "A consideration of the gold standard under approximately normal conditions would show instances where exchange stability had ... promoted price-level stability, but it would also show instances where it had promoted price-level instability." In passing to "Foreign Trade Under Fixed and Variable Exchange Rates," the equilibrium rate of foreign exchange is first taken up and it is said that "The experience of the years 1931–36 indicates very clearly that the ability of a country to effect payments abroad is not necessarily reduced but may be very greatly increased by allowing a currency to seek its equilibrium rate of exchange."

Dr. Whittlesey then takes up "Unstable Factors in the Balance of Payments" and in the course of his discussion, analyzes short-term capital movements under gold and paper with respect to (a) financial credits, (b) security transactions and (c) commercial credits. In connection with the last topic it is shown that there is likely to be wider fluctuations in the maturity of bills of exchange under a system of free currencies than under a gold standard and this is "... possibly the weightiest argument of all for a gold standard, and it is generally ignored." Chapter VI follows with a treatment of "Governmental Controls and the Theory of International Trade and Finance," in the course of which five generalizations are derived from "... the original proposition of the international equation of payments ..." Here it is shown that "By the imposition of exchange control and the refusal to appropriate foreign exchange to meet the service of ... foreign debt, it is a simple matter for a country to depress greatly the market price of its foreign obligations." Thereafter it may buy in the depressed bonds at a great reduction.

"Foreign Investment Under Fixed and Variable

Exchanges" is the subject of Chapter VII. Here the author points out that "The view that the real burden of its foreign debt for the country as a whole is measured by changes in its nominal value in terms of the local currency is more than an optical illusion . . . " The author goes into the view that foreign investment would be greatly restricted by the lack of a common international monetary standard and he gives particular attention to the arguments advanced by Nurkse in support of that position. These arguments are found deficient (p. 175). In his discussion of "Banks and the Exchange Rate," Dr. Whittlesey points out that the efforts of central banks to stabilize exchange rates may interfere with their efforts to influence the internal price level, business activity and employment. "If central banks are determined to follow other aims—and it seems certain that this is the case—a freeing of the exchange rates would remove a handicap to their attainment." It is also contended that short-term capital movements would be more likely to occur under the gold standard. In general, under a national rather than an international monetary standard, the central bank could pursue stabilization policies that would otherwise be difficult if not impossible.

Passing to "The Monetary Outlook," Chapter IX, the author considers the causes of fluctuations in the value of gold and the prospects for the future of gold and the gold standard. In the latter connection he remarks that "Not only is there . . . an increased possibility of fluctuations in the value of gold; it is, in addition, very hard to discover any element that seems likely to prevent a great decline in the commodity value of gold within the next decade." (p. 201). For several reasons Dr. Whittlesey is disposed to feel that the gold standard could not be maintained even if it were restored. The enormous concentration of gold, the loss of prestige, the concentration of gold and the flight of capital from one currency to another are serious problems to contend with. In consequence, "As a country, we are in the position of a bank that pays interest on demand deposits while holding the full amount of the deposit in the form of cash in the vault" (p. 206). Accordingly, we would profit much from monetary reform.

As to the proposals for reformation there is, on the one hand, stabilization of gold with provision for altering the ratio between currency and gold whenever changes in the purchasing power of gold make this necessary to relative stability of prices. On the other hand, there are the gold standard with its fixed exchange rates and a paper standard with free exchange rates. Dr. Whittlesey is willing to admit the desirability of the first alternative over the latter two, but he is not willing to concede that the first is superior to a system of variable exchange rates without any connection between a currency and gold. However, it is admitted that it is impossible to know, when using exchange-rate movements as a guide to monetary policy, ". . . whether a particular movement of the exchange rates is of a short-run character, which might be resisted, or of a long-run character, which should not be resisted."

The discount rate of the central bank as an instrument for achievement of resistance has proved quite unsatisfactory. "There is . . . need for some device that will act only upon the balance of payments and thus free the domestic situation from the tendency, inherent in the use of the discount rate, toward contraction and expansion." The equalization fund amounts to such an instrument, since its net effect is ". . . to change the net price of foreign money without affecting the price of domestic money." The volume concludes with a discussion of implications of the present outlook. Here a number of hazards are considered and it is the final thought of the author that, "The most important of these hazards is that maintenance of rigid exchange parities will lead to freezing of currencies in an intolerable position of disequilibrium."

This reviewer can agree with the author that there is at least a possibility that his volume will be considered a indictment of the gold standard, for it is that. But it is also a serious and fairly successful effort to consider the merits of a system of free currencies as an improvement over the gold standard as it is likely to work. In the course of the thesis in behalf of the former, the author reveals a firm grasp of monetary fundamentals and considerable expository skill. Moreover, he is to be congratulated on his openmindedness, for he not only succeeds in giving his reader a firmer grasp of the gold standard as it was and would be under probable conditions, but he takes one into new paths of monetary thought, though not without benefit of scientific method. The volume will, therefore be found decidedly useful to all students of monetary economics, both teachers and scholars.

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Municipal Bonds. A. M. Hillhouse. (New York: Prentice-Hall, Inc., 1936, pp. xiv, 379.)

Mr. Hillhouse explains in his preface that this volume is ". . . a study in pathology. Our concern is only for the mistakes—those made in the past, those to be corrected in the present, and those to be avoided in the future." The fifteen chapters and the several appendices have enabled him to accomplish his purpose in addition to submitting what must have been considered a very acceptable Ph.D. thesis.

The first chapter, "The Present Municipal Debt Problem," considers the default record and points out that there ". . . is no accurate record of the amounts that have been in default from 1930 to 1936 . . ." There follows a "Summary of Past History" in which the causes of municipal defaults are historically considered, "Carpetbaggers, Civil War Aids and Acts of God" form the subject matter of Chapter III which is followed by a highly useful discussion of "Real Estate Boom Bonds." Under this topic he observes that "The prize crop of boom bond troubles of all time . . . came with the collapse of the Florida real estate speculation in 1926." It is further remarked that much of the indebtedness accumulated by Florida cities was not authorized by vote of the people, but by real estate speculators who had by various means become the town councilmen (p. 83).

"Other Improvement Bonds" is the title of Chapter

V and then comes "Special Assessment Defaults," Chapter VI, in which the author attempts to make up for the deficiency of material on a subject which hitherto has not been adequately treated and it may be said that he has succeeded very well, indeed. The discussion of "Railroad Aid Bonds" is of outstanding value. Here the record of such issues is fully examined and the reaction in the form of state laws restricting municipal indebtedness is also brought out. Notable examples of controversy between defaulting municipalities and bondholders are thrown in and add much to the discussion. Thus, the notable case of St. Clair County, Missouri, is referred to. "Most states got their first experience with municipal debt troubles when defaults occurred upon railroad aid bonds. Present prohibitions or restrictions upon aid to private enterprises and present debt limits owe their origin to this earlier period. . . . More important, this prior era furnishes the only extensive experience with debt adjustments which might serve as guides for action in the present" (p. 198).

There is an excellent chapter (VIII) on "Canadian Experience with Defaults" in which the author includes an analysis of the causes of Canadian defaults. Chapter IX, "Causes and Conditions," goes into an analysis of the underlying causes of default on the American side and it is brought out that, ". . . the major portion of overbonding by municipalities arises out of real estate booms." The author had an excellent opportunity to go into the flow of bank credit into real estate loans as the really basic factor here, but failed to seize it (p. 246). It is also remarked that the automobile contributed much to the real estate booms of the twenties.

"The most dangerous types of legislation has been the old-fashioned, much-relied-on, constitutional and statutory debt limit, which has brought evils into our local government structure that only decades can erase." This and other types of faulty legislation are discussed in the light of experience and it is also found that "Laws governing the authorization of special assessments have been unduly lax." The author finds need of ". . . a measure of debt burdens relative to resources or potential ability to carry the debt load."

"Creditors' Remedies" is the subject of Chapter X. Here the analysis considers, general obligations, special assessment obligations, special district obligations and revenue bonds separately. Equitable remedies are considered separately from remedies at law and the case of Rees v. City of Watertown is referred to because "The doctrine in this case became a precedent." (p. 299) in cases involving municipal receiverships. "State Remedial Measures" is the subject of the following chapter and administrative receivership laws, general in application, as enacted in North Carolina and New Jersey, come in for treatment along with other types of state legislation for municipal relief. It is the opinion of the author that "There is definite need for concurrent action by both the federal and state governments," since a state recovership cannot coerce minority creditors (p. 353). Moreover, it is felt that "A federal municipal debt adjustment act should be made a part of our permanent bankruptcy machinery."

Next comes "Debt Adjustments," the subject of Chapter XII. Dr. Hillhouse believes that the records of the decade following 1873 should be searched for danger signals, since that period is more nearly analogous to the present than any other. In debt adjustments, a municipality should act so promptly as to make bondholders' protective committees unnecessary (p. 377), since these committees are a disadvantage from the point of view of the municipality. In this chapter there is also included an excellent account of the fortunes of the Federal Municipal Debt Adjustment Act.

In discussing "Consequences of Default," Chapter XIII, both the immediate and the long-run factors are considered and in connection with the latter it is observed that, "If a longer-run view is taken, the chances are strong that a past default will largely be forgotten with another upward swing of the business cycle, unless bondholders are forced to accept a compromise." (p. 422) In the topic next discussed, "Preventing Municipal Defaults," Chapter XIV, it is said that "Few cities have well-defined long-range debt policies" and it is suggested that municipal financing take account of the swings of the business cycle. To this end greater flexibility in the Municipal debt contract would be helpful. There is also need of several restrictions upon special assessment financing. Debt limits rather than tax limits constitute the proper approach to the upper-limit automatic type of capital expenditure restriction, and "Evasion of debt limits by inflation of assessed valuations must also be prevented." (p. 457)

The author feels that "there is a definite need of metropolitan regional debt commissions . . ." and it is urged that municipal revenue systems be strengthened. "There are no price indices to show the wide fluctuations, up and down, of land values, but in general municipal debt is geared to an unstable base." In the Conclusion it is said that, "Defaults result mainly from the failure to maintain a proper ratio between fixed debt charges, current operating expenses and revenues." It is recommended that "The debt limit . . . should be an over-all limit applicable to the combined debt of all over-lapping units of government." A shift to the pay-as-you-go policy for a decade or so would be a healthy policy, but it is not believed that there will be such a trend.

This volume has several distinctive features of value. It stresses the historical approach, and very wisely, for thereby the student of municipal bonds is enabled to draw upon the accumulated experience of the country. It is made evident that, to a very significant degree, the lessons of the past have applicability today. In the next place, our experience with municipal bonds is definitely related to the economic development of regions during distinct phases of their growth and also to the methods of employing municipal credit to finance that growth. In the third place, the story of municipal bonds is definitely related to the facts, and in considerable detail, as is amply attested by the documentation. In the next place, the author very wisely includes an analysis of Canadian municipal finance, for, from the point of view of the bond market, Canadian municipal bonds are not considered as "foreign" bonds. Again, the author shows a firm grasp of the legal aspects of his subject and satisfactory familiarly with the legal aspects of a type of bond where legality is important is a distinct advantage.

Finally, there is no tendency to superficial criticism. The underlying facts are kept in mind. In addition to these things, there are valuable appendices and bibliographies. This reviewer commends the volume to all students of the subject and only regrets the failure of the author to take more fully into consideration the consequences of the flow of bank credit into municipal "improvements" and into municipal securities.

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Some Origins of the Modern Economic World. E. A. J. Johnson. (New York: The Macmillan Company, 1937, pp. vi, 163. $1.35.)

"This little book is designed to give beginning students of economics and other social studies a simple account of the origins of some of the more important elements of the modern economic world." In other words, the author does not consider this volume to be "... a survey of economic history; it merely examines several crucially important historical episodes and relates a limited number of innovations which appeared in each to their modern counterparts."

After an introductory chapter, "Economic Activity and Development," the author takes up "The Late-Medieval Background" and there brings out effectively the nature of manorial society by illustration from Oakington Manor, "Thus for the annual use of 8¾ acres of cultivable land the villeins of Oakington gave ... almost the whole produce of one of the precious acres ... to obtain the required rent money." Eventually, the commutation of labor-services with money payments became "... one important reason for the dissolution of the manor as an authoritarian economic institution." Important fourteenth-century English towns possessed almost complete freedom from manorial or ecclesiastical jurisdictions as a result of this process of commutation. This freedom stimulated the growth of crafts in cities and there developed an economic connection between town and country by means of markets. By means of rather broad strokes the author sweeps on to the rise of the wage system and its spread in the woolen industry. Thus an industrial system wholly different from the corporative idea of the craft guild was expanding rapidly at the close of the period.

"The Emergence of Capitalism" becomes a logical next topic in view of the account of the rise of the wage system which went before. Here the author takes up agricultural changes incident to the decline of serfdom and the rise of "An energetic, ambitious group of large farmers. ..." The beginnings of governmental control of agriculture are traced from the first corn laws in the fourteenth century. Also, the emergence of a "... new class of business men who refused to be bound by the fraternal rules of the craft guilds" plus the grafting on to the corporative idea of the guild, which produced the joint-stock company from which there evolved the modern business corporation. This section of the book is, perhaps, the most effective. The continuity of institutions is traced with considerable facility from this point on. The account of the "livery" companies, regulated companies, joint-stock companies and organizations of private business strengthens the volume and this is particularly true of the joint stock companies which "... wove together ... elements of several origins: the idea of perpetual succession from the guilds, forms of government from the regulated companies, separation of ownership and management from the *commenda*, and the idea of a joint-stock partially from the guilds and the regulated companies, but more particularly from the *societas*. But it is made clear that "... the simple proprietorship, was probably as significant as all three combined" i.e., as the livery, regulated and joint-stock companies, in 1700.

By 1700, "... agricultural, industrial, and commercial changes may be called definitely, 'capitalistic'." The author then does well to discuss the sources from whence came the ever-increasing quantities of capital which assisted the transformation of economic institutions. By that date trading on credit had become customary in practically all important branches of trade and industry. Book accounts and negotiable instruments provided the commonest method whereby credit was granted. "Four outstanding components of the modern economic world were beyond the experimental stage by the year 1700: the wage system, the corporation, the capitalistic proprietorship, and the commercial bank" (p. 62).

"The major cause of England's economic progress by 1700 had proved to be the efficiency of her business organizations; the secret of her still greater progress by 1800 can by attributed to the combination of these organizations with improved industrial technology." Then comes an account of the reorganization of agriculture following the enclosure movement and it is said that "Modern agriculture can properly be said to have originated in England during the eighteenth century. But the dramatic changes in agriculture were paralleled by even more far-reaching transformations in English commerce and industry" and this subject is then developed excellently, considering the brevity of the volume. Here and there striking passages vitalize the discussion. Thus, "... Richard Arkwright became, for better or for worse, the model for thousands of business men both in his own and in subsequent generations." As for the by-products of capitalism, "The early English factory owners saw no other solution than to employ their machinery as continuously as possible." Again, "... Watt was therefore instrumental in weaving together the empirical discoveries of his predecessors with theoretical physics, and was at the same time able to prove the worth of this synthesis in a capitalist world."

The author then passes to "The Formulation of Capitalist Theory" with the ironical observation that "Philosophers, like vegetables, are profoundly influenced by their environment." Therefore, of the economic thought of the Industrial Revolution it is said, "Its chief fault arose from the fact that it was too British. ..." In any event, "... mercantilism ... gave literary expression to business hopes, and hastened materially the development of English capitalism." But the rising industrialists of the later part of the eighteenth century"... found in the *Wealth of Nations* a philosophical rationalization of their quite unphilosophical desires." Eventually, these same interests did not

hesitate to employ the state to promote their own profit-making ends (p. 105). And that is not all, for "... England's industrial advantage over other nations in 1800 can be attributed partly to the merciless exploitation of helpless parish paupers." But, if Adam Smith's philosophy was pleasing to the rising capitalists, Malthus' was more so. "Here then was a philosophical font in which factory owners could wash their unclean hands." Nevertheless, the evils of the system were all too apparent and legislation came in 1802, known as the Health and Morals Act. Concerning it the author quotes Mantoux, that it "marked the first step on the road which begins at complete *laissez-faire* and ends at State Socialism." Another milestone is found in the revision of the Corn Law of 1815 in 1846 and "... the modern economic world may be said to have arrived" (p. 115). However, the author does not consider this an adoption of *laissez-faire*.

"Protection and the Transplantation of Industrialism," starts off with the question, "From whence comes this worship of protection which pervades the modern world?" The growth of the faith is traced in the United States, and parts played by the crushing of the South in the war between the States and by List, both in America and Germany, are woven into the narrative. Unfortunately, List's dream of free trade emerging out of German protectionism was lost, for imperialism is what actually emerged. Thus, we are brought to the final chapter, "The Export of Capital and the Genesis of Economic Imperialism." in which it is explained that British manufacturers sought "... to stifle the rise of the factory method manufacturing abroad by underselling all competitors," but resort to protective tariffs abroad defeated this plan. Hence, British penetration took the form of the export of capital, but this only developed competitive industry abroad. Thus, British capitalists undermined the advantages of British manufacturers abroad. Eventually this conflict of interests led to colonization where the two forces could be made to work to their mutual advantage. Appropriately, the discussion comes to an end with a brief treatment of the new form of "absentee ownership" and the countless new problems which have been produced by it.

Dr. Johnson has achieved his purpose, for he has successfully woven into a fabric the main threads of economic evolution and this cannot be done unless the weaver has a thorough grasp of his subject. The main defect of the work lies in the brevity of the treatment. In other words, it is extremely difficult to write so briefly and yet bring in all that is vitally significant and at the same time make its significance obvious to the general reader. There is no more alluring subject than economic history, especially when the writer is equally well informed on both the economic phase and the historical, which is seldom the case. Moreover, there is no more profitable field for study, if one would grasp the significance of current events. Consequently, it is to be hoped that this small volume will be widely read by business men and those university students who, without a knowledge of economic history, can hardly be called "educated."

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America's Experience as a Creditor Nation. John T. Madden, Marcus Nadler, and Harry C. Sauvain. (New York: Prentice-Hall, 1937, pp. xvi, 333.)

The authors feel that there still remain many misconceptions concerning America's position as a creditor nation and that these "... must be corrected and better understanding of the principles of foreign lending must be obtained." They have, therefore, made it the purpose of their book, "... to provide a factual description of America's experience as a creditor nation and to present a critical appraisal and interpretation of this experience."

The discussion starts of "The Economics of Foreign Lending" and here it is contended that "... productivity cannot be used as an accurate criterion of the soundness of a foreign loan." In addition they take the position that capital invested abroad can be repaid, since "... there is no reason why a country could not gradually adjust its balance of international payments over a considerable period of years to permit the withdrawal of foreign capital without injury to domestic business." Evidently productivity is a factor after all.

"The International Position of the United States Before the War" is taken up by historic periods and it is shown that the United States "... was still a debtor nation, on balance, to the extent of \$2 billion to \$3 billion at the end of ..." the period ending in 1914. Then comes "The Transition from Debtor to Creditor Nation," Chapter III, in which it is observed that "No country ever became a creditor nation under less auspicious circumstances than did the United States." Here, also, the arguments of defaulting governments are considered in a manner that is much too brief, but it concluded that only one argument is valid, namely, that the decline in the price level has materially increased the burden of the war debt payments, a fact which constitutes a valid argument for the revision of the post-war debt-funding agreements. The argument that war debts were to be paid out of reparations and the argument that the war loans were gifts to the Allied cause are dismissed as untenable.

"The Economic Hegemony of the United States" is taken up in Chapter IV. Here it is pointed that with the year 1931, there, "... ended perhaps the most remarkable period of foreign lending in the history of the world. In twelve years the American capital market had absorbed \$11,623,000,000 of foreign security issues, or \$9,869,000,000 exclusive of refunding." In the period from the end of 1919 to the end of 1930 this country's "... private long-term foreign investments increased from about \$5,680,000,000 to about \$15,170,000,000. Of this total, portfolio investments made up \$7,204,000,000 and direct investments constituted \$7,966,000,000. In addition there were also the war debts outstanding in the amount of \$26,810,000,000. Allowing for the relatively slight increase in foreign long-term investments in the United States in this period, from 1919 to 1930, of about \$1,900,000,000, the United States was "... a creditor nation on private long-term capital account to the extent of slightly more than \$10,470,000,000" (p. 79), exclusive of the war debts, and the net credit balance was about \$22 billions with the latter

included. But, we were debtor on short-term account in the amount of $935,000,000.

Chapter V takes up "Economic Effects of Capital Exports on the United States." It is brought out that the economic significance of the $3,500,000,000 of merchandise which we were able to sell abroad in the years from 1921 to 1929, as a result of our capital exports, was greater than the figures would indicate. It is also held that the foreign loans made during the 1920s have been profitable to American investors (p. 87). Even so, it is concluded that "The export of capital failed, on the whole, to bring lasting benefits to the United States, chiefly because this country was not ready to adjust its international relations in a manner consistent with its position as a great creditor country" (p. 103).

The authors then pass to "Defaults of Foreign Dollar Bonds," Chapter VI. It is pointed out that the first defaults took place in South American countries and that the European defaults did not begin until a year later. It is said that a genuine effort was made by Germany, Austria and Hungary to avoid default, and the authors support this statement somewhat in the case of Austria. Beyond that the treatment is inadequate, even though tactful. "The Statistical Analysis of Defaults" very properly forms the next chapter. Here is to be found the new studies as well as some previously done for the Institute of International Finance. Three extensive statistical compilations have been made: (a) The amount of foreign dollar bonds in default in relation to the total amount outstanding as well as the status of payment on those bonds that are in default. (b) An "accounting" of American foreign lending through the medium of publicly offered dollar bonds during the post-war period. (c) A compilation indicating the average annual rate of return on foreign dollar bonds issued in this country in the years 1920–31.

It is brought out that the "... percentage in default is highest for foreign corporate issues, which is attributable chiefly to the fact that German issues represent 29 per cent of the total amount of foreign corporate bonds outstanding." In their final appraisal of the default situation the authors say, "The fact is that interest has been paid in full, through the longest and most severe depression in modern times, on almost two-thirds of all the foreign bonds currently outstanding" (p. 136). In the following chapter, "The Financial Results of American Foreign Lending" are presented with the remark that "... investors in foreign dollar bonds in the aggregate have not lost money." It is found that, "... the average annual rate of return on our post-war foreign loans for the sixteen years 1920–35 was approximately 6%. This yield consists of interest received in cash, plus or minus premiums or discounts on bonds redeemed." It is also made clear that the compilation on which these statements rest "... shows the financial outcome of the foreign dollar bonds *originally sold to American investors*" (p. 140).

"The Transfer Problem" is the subject of Chapter IX and is a most acceptable discussion since "... the transfer problem is the chief cause of the default on foreign securities issued in the United States ...." For this situation the authors hold our own country largely responsible, since "... the United States ignored the fundamental principle that foreign trade must in the long run be reciprocal, and pursued the economically ambiguous policy of trying to export as much as possible and to import as little as possible ..." (p. 174). Our lack of readjustment to our position as a creditor country is (a) ascribed to the suddenness with which we became a creditor country, (b) to our natural economic self-sufficiency and (c) to the fact that our lending began in a period of economic nationalism.

"The Creditor Position of the United States at the End of 1935" is the subject of a very useful discussion, Chapter X, for there it is brought out that the United States "... changed its position from net exporter of long-term capital to net importer." by 1931. Again, it is made clear that "... as far as portfolio investments are concerned, the United States is a debtor country" (p. 195). Furthermore it is shown that "... American investments abroad are much less liquid from the national standpoint than foreign investments in this country." Finally, it is concluded that "... the United States is emerging from the depression in a much better position to receive interest and dividends on its foreign investments, and to carry on a balanced foreign trade, than it was during the 1920s."

Chapter XI considers "The Role of the Investment Banker" and it is admitted that investment bankers as well as investor banked on the continuation of the trend. Even so, the authors find little to commend in the hearings before congressional committees, largely because the committees failed to grasp the significance of the transfer problem. However, they do accept the view that there was excessive competition for foreign loans on the part of the bankers. "Government Influence in Foreign Lending" is the logical next chapter. "... federal 'supervision' of foreign lending through the State Department was abandoned" in 1932, but the record is found sufficient to support ample criticism because of the inadequacy of the policy pursued (p. 245). Continuing the authors point that, "Thus far the Johnson Act has not caused a single country to resume war-debt payments." Weakness in the Federal Securities Act of 1933 appears in that "... underwriters of foreign government issues are able to avoid responsiblity for the accuracy of information contained in registration statements by representing them as statements made by (foreign) public officials."

"Government Protection of Foreign Investments," Chapter XIII, discusses the discrimination against American holders of German dollar bonds and it is said that "The German Government apparently heeded the demands of its foreign creditors only when they were in a position to exercise economic coercion" but the distinguishing feature of American policy towards foreign debtors is found in its refusal to use economic pressure and it is implied that it would not have been used against Germany even if it had been available. "The Readjustment of Defaults" brings out the weakness of the special committee system of readjustment. But, in general the authors feel that the process of readjustment has not gone far enough to permit of very definite generalization, even though they feel that the outlook for the future "... is reasonably favorable."

The volume concludes with seven valuable and

pertinent appendices, a short bibliography and the index. What is the final judgment of this reviewer? The authors have performed a distinct service because (a) they have provided a valuable analysis of just how we became a creditor country, (b) they have explained the shift in that position in recent years, (c) they have analyzed our foreign investments, and (d) explained their present status and (e) the position of this country as an international creditor country, allowing for both long-term and short-term account, at the end of the year 1935. From that date the student of the subject can keep himself up to date by merely bringing up the data as it becomes available for subsequent years.

The work of these authors is, therefore, to be commended for they have placed in the hands of students of the subject in its various phases useful material in a much-needed and convenient form. Of course, criticism of this work would be easy to apply because it contains many elements of controversy and also because there is a disappointing failure to go into certain subjects more fully, including the controversial subject of willingness to pay as against the barrier of the transfer problem. However, it may be said that such material is outside the scope of this treatise.

E. A. Kincaid

University of Virginia

Business Cycles and Forecasting. Elmer C. Bratt. (Chicago: Business Publications, Inc., 1937, pp. xiii, 501. $3.50.)

"The purpose of this book is to provide an explanation of the nature of economic change taking place at any given time" and it is the belief of the author that "Economic change can be logically explained." To this end six major analytical steps are found necessary, namely, (a) reasons for the existence of economic change, (b) the statistical methods available for measuring economic change, (c) the extent to which economic change can be prevented by foresight, (d) methods of forecast and their adequacy, (d) the function of the forecast and (f) the available data for indication of current happenings. These have been ". . . carried out to the extent of the author's ability with presently available knowledge. . . ." and the result is a book ". . . written for use as a text for college courses in business cycles." The entire treatment involves twenty chapters, forty charts and thirteen tables.

The introductory chapter is followed by a discussion of "Seasonal Variations in Industry" and the author then takes up, "Normal Levels of Industry" in which there is much of value, especially what is said concerning the factors determining the long-time trend of total industry. In the course of this analysis, he asserts that "The best evidence would indicate that we would expect a cycle of somewhat greater average violence in the future than that which existed on the average in the past." Chapter IV considers "Statistical Methods for Measuring and Analyzing the Business Cycle" and then comes a discussion of "Factors Responsible for the Cyclical Nature of Business" in the course of which it is said ". . . that the production of durable goods varies widely over the cycle . . ." but this is not due ". . . to credit expansion and contraction," though it is admitted that the latter may accentuate the variation. The subject is continued in Chapter VI. Here business responses during the phase of incline and the phase of decline are analyzed and it is said that these ". . . responses, with cumulative changes, would occur even though temperament remained relatively even over the cycle. . . ." The author introduces original terminology. Thus it is said that "The forces which tend to drive business on in the direction in which it is going are called self-reinforcing forces and the factors which tend to turn it in an opposite direction are called self-limiting forces" (p. 115). The cycle is then defined ". . . as a fixed recurrence of phases." However, present knowledge of responses permits of only two phases, incline and decline.

"Business Cycle Theories," the subject of chapter VII, comes to the conclusion that ". . . past attempts to trace the business cycle to single causes have been unsuccessful." Incidentally, it is remarked that Keynes has developed a rather subtle theory dependent upon a difference in variation in investments and savings. But it does ". . . not explain why savings themselves vary over the cycle, nor does it explain many of the other cumulative forces" (p. 149). The following chapter considers "Business Cycle History." The authors remarks, in the course of the discussion, that "Many people have claimed that the present depression is by far the most severe in the history of the world. . . . such a belief cannot be substantiated by the facts" (p. 173). He bases his statement on the changes in economic processes and the resulting changes in the position of these processes in the economic system. The subject is continued in the following chapter with special reference to the influence of specific originating causes at various times. Unfortunately, the treatment is too condensed to be entirely satisfactory for the earlier cycles. It is concluded that ". . . the originating causes do not set length of cycles in any uniform way, i.e., that is the verdict of history."

In his discussion of "Factors Responsible for the Length and Severity of the 'Great' Depression," it is said that the ". . . semi-monopolistic conditions into which most industries had fallen by the late 1920's, was great enough to make possible a holding up of most prices . . ." (p. 226) and it is also pointed out that "many of the measures taken under the New Deal have been a mere postponement of the facing of the real issue. . . . Many measures . . . have tended to restrict activity which is already much restricted in a depression." The author recognizes that "The excess of investment-type assets over savings-type liabilities in bank portfolios . . . in the first half of 1929 . . ." indicated that capital goods were being produced on credit and other self-limiting factors in the preceding phase of incline are also examined. The phase of recession—June, 1929 to June 1932, the phase of trough, July 1932 to March, 1933, and the phase of recovery are analyzed in a satisfactory way without any contribution to existing information.

The same topic is continued in Chapter XI, where it is remarked that "Hoover's program of capital extensions in the spring of 1930 merely increased the over-expansion which must inevitably be corrected." It is

also very truly and wisely said that "Many of the measures taken by both the Hoover and Roosevelt administrations have been merely to defer the fatal day on which vested interests take large losses." Dr. Bratt is disposed to reject the idea that the World War is responsible for the length and severity of the Great Depression and in this connection it is remarked that the depressions of 1924 and 1927 were cut short. Moreover, he is skeptical about the theory that there must be a secondary depression after every major war (p. 257). Finally, it is concluded that ". . . we are not yet prepared for an economic organization vitally different from that of the capitalistic system."

The author suggests that ". . . the measure of the depth of the depression is the ratio those employed bear to the number gainfully employed at normal levels." He also points out that the increasing rigidity of prices which have come as the result of monopolistic tendencies and the increasing proportion of durable goods demanded by consumers will tend permanently to make cycles more violent (p. 260). On the whole, the treatment of the Great Depression is much improved by the second chapter on that subject.

The author then passes to "Schemes Proposed for Artificial Control of Cyclical Movements" and these are considered in two chapters. Very appropriately there follows a discussion of "Business Stabilization and the Desirability of Moderate Cyclical Movements" in which it is observed that ". . . under the capitalistic system the cycle is one of the costs of progress." Then come a series of three chapters, XV to XVII, on business barometers in which will be found an analysis of the prevailing methods of measurement and an explanation of their advantages and of their deficiencies. But, this reviewer cannot agree with the statement that "The federal reserve ratio is the ratio between the gold reserve of the reserve banks and their note and deposit liabilities" (p. 398). But in other respects the three chapters cover the subject about as well as could be expected in the space allotted.

"Characteristic Fluctuations of the Business Cycle" and the "Forecasting of Business Cycles" are the subjects of the following two chapters. In the latter it is said that ". . . our chief hope for business-cycle forecasting rests upon the method of historical comparison" and it is the author's opinion that the ". . . most perfect business-cycle forecast would not completely eliminate the cycle in a capitalistic society." The final chapter, XX, "Problems of Forecasting Economic Change" accepts William Dunnigan's statement of maxims of prices of stocks and also his tests of them through empircal evidence, ". . . as indicating higher stock prices have given correct indications in the majority of the marketing situations of the recent past."

It may be said that Dr. Bratt shows a good command of the several fields of knowledge and of the technical skills essential to the preparation of a text of such considerable scope. He has a fair grasp of economic history, a knowledge of economic institutions, a familiarity of economic theory and he has, in addition, an understanding of the fundamentals of statistics.

There is something to be said in support of a combined treatment of business cycle and forecasting from the point of view of the instructor of undergraduate students, since the latter may be considered as in some degree an application of the former. At the same time it must be recognized that the task is difficult, if confined to the limits of an ordinary text.

Dr. Bratt's text assembles and presents rather well the diverse materials that must come within the scope of such a text and, since there is really no other text on the subject, it must be admitted that he has performed a real service to all teachers of the subject. The questions and the bibliographical material cited at the close of each chapter add to the value of the text and will promote its use and, therefore, the study of a subject which should be made familiar to all well-educated persons both in and out of universities.

E. A. KINCAID

University of Virginia

Introduction to Cost Accounting. Norman Lee Burton. (New York: Longmans, Green & Company, 1936, pp. ix, 269. $1.00.)

The main roads of accounting have so many tempting side paths that an author finds it difficult to decide which to explore and which to omit in any given book. The problem is particularly acute in a book such as Professor Burton's, which is "of small compass" and "the distilled essence" of the subject. Professor Burton has shown remarkable restraint and the distillation has resulted in a clear cut presentation of the essentials of cost accounting.

The early chapters are concerned with the nature of cost accounting, the meaning of cost and the relation between cost and general accounting. In addition to describing the control features of cost accounting the reader is shown by simple illustration that the problems of cost apportionment give rise to and are met by the techniques of cost accounting. In comparing cost and general accounting the author introduces a bit of effective humor as follows: "If, without carrying the comparison too far, a business as a whole may be likened to a family, its general accounts reflect its possessions, obligations, and activities in the same way that the kind of house a family lives in, the quality of its furnishings, the character of the family's associates, and the nature and extent of the activities and social life of its members reflect the life of the family in so far as revealed to the public."

"Cost accounts, on the other hand, relate to transactions within a business. The details of these are unknown to the public and would be of little interest. Similarly, to continue the comparison with what goes on within a family circle, the spankings, scoldings, commands, pleadings, words of encouragement, experiments, rearrangements of furniture, and preparation of meals are of interest only to the participants. Still, the net result of these events day after day is the impression which the family as a whole makes upon the community."

As further treatment in the relation of cost and general accounting a chapter is devoted to the manufacturing statement, including a comparison between the income statement of a manufacturing company and that of a mercantile concern.

The book then describes both external cost records (ledgers or books of original entry such as general ledger, voucher register and cash book) and internal cost records (factory journal, factory ledger, materials records, labor records, etc.) and cost methods (job-order costs, process costs, estimating costs and standard costs). It is noted that, "Estimating and standard cost systems do not displace job-order or process methods. They merely modify the procedure of one or the other. Fundamentally, every cost system, by whatever name called, is either a job-order or a process-cost system."

The next six chapters cover the various aspects of accounting for material, labor, and manufacturing expense. Consideration is then given to summarizing the costs and closing the accounts.

For the remainder of the book a chapter is devoted to each of the following subjects: By-products and joint costs, standard costs, selling and administrative costs, cost reports to executives, and mechanical devices used in cost work.

The book is properly entitled an Introduction to Cost Accounting. It deals with the elemental and fundamental and ably supplies the need of those who wish to broaden their present knowledge of accounting to cover the fundamental concepts of cost accounting. Space limitations restrict the treatment of the more philosophic aspects of the subject, but the student who has mastered the material here will have covered the main road and be ready if he so desires, to explore the side paths.

C. B. NICKERSON

Harvard Graduate School of Business Administration

Theory and Mechanics of Accounting. Leo A. Schmidt. (New York: Prentice-Hall, Inc., 1937, pp. xvi, 475. $4.75 Trade List.)

It is a common experience to encounter each year in a beginning class in accounting a number of students who are of the opinion that accounting can be learned with only superficial attention to the bookkeeping aspects. The various sources of this error need not concern us here, but unfortunately there are trends in some of the recent textbooks which give it at least mild support. These books, designed for the first-year or intensive single course, are tending to cover such a wide area as to reduce below a sound minimum the time that can be devoted to bookkeeping fundamentals. It is refreshing to note in Professor Schmidt's book that he makes no apology for the allotment of considerable space to bookkeeping, but in fact believes it desirable, "because of the universality and the everyday importance of this subject." He goes further and suggests that the student be required, if possible, to work all of the problems, which have been carefully designed to parallel the text closely, in the belief that "practically speaking, the student retains only that which he has also experienced in the form of a concrete problem which he has had to solve."

The book is a revision and enlargement of the author's "Mechanics of Accounting," published in 1929. It should not be implied from what is stated above that it is concerned solely with bookkeeping. About 40% of its space is devoted to the fundamentals and development of technique, 30% to problems of valuation, 7% to partnership problems, 11% to corporations, and 12% to the management uses of accounting. In terms of course time, presumably the first half of the course would be spent on the fundamentals and development of technique and the second half to the remaining subjects.

The total area covered is wider than used to be common in first-year textbooks but does not appear to go too far in this direction. The subject matter has obviously been selected with care and, as indicated in the preface, with a view toward the frequency with which it is encountered in business and its pedagogic usefulness. The material is well arranged and each new subject starts with a statement tying it in with that which has preceded, a distinct aid to the student in maintaining sound perspective.

Here, as in any book on accounting, one can find minor expressions of opinion with which to take issue but this does not detract from its utility. It follows the conventional balance sheet approach and though the nature and determination of income are by no means neglected they are made subordinate to balance sheet considerations.

In conclusion, we find here familiar subject matter in a presentation that has had the benefit of both an earlier edition and trial in mimeographed form. It should prove well adapted for a first-year course whether or not the student is to continue on to further study in accounting.

C. B. NICKERSON

Harvard Graduate School of Business Administration

UNIVERSITY NOTES

Dartmouth College

William R. Gray, dean of the Amos Tuck School of Administration and Finance, died a short time ago.

James A. Hamilton, assistant professor of industrial management, is leaving the department. Richard L. Funkhouser is joining the staff as instructor in statistics and assistant dean. Victor Z. Brink will be a new instructor in accounting.

New publications of the department are: "Manual of Research and Reports," issued by the Committee on Research; "Problems in Labor Relations" by Herman Feldman; "Principles of Money and Banking" by George W. Woodworth.

Denver University

Clem W. Collins, dean and head of the department of accounting, is serving as chairman of the income-tax committee of the Colorado Society of Certified Public Accountants. Working with him are Professors John B. Mayo and John L. Larson. The committee was active at the last legislature in drafting the new income-tax law for the state. Professor Mayo is head of the legislative committee of the Colorado Society and successfully guided through the legislature a new accountancy act restricting the practice of accounting and classifying practitioners.

University of Illinois

Frank Higginbotham has accepted a position as head of the accounting department of the Central YMCA College of Chicago. Assistant Professor Karrenbroc, has accepted a position at the University of California at Los Angeles. W. E. Campbell of the Canal Zone Junior College succeeds Mr. Higginbotham. Mr. Walter Press, formerly of this department but for the past two years with the Resettlement Administration, is returning as assistant professor of accounting. Dr. Paul Green, who for the past three years has been serving as chief research accountant of the Federal Housing Administration is returning to the department and will have charge of the courses in corporation finance.

Other new members of the staff will be: M. N. Broussard, University of Louisiana; J. M. Carrithers, Iowa State College; H. L. Morris, University of Colorado; R. K. Mautz, University of North Dakota; J. R. Taylor, University of Louisiana; G. B. Vasen, University of Illinois.

Professor A. C. Littleton taught in the summer session of the University of California this year. Professor C. F. Schlatter has been made associate dean of the College of Commerce and Assistant Professor R. P. Hackett has been made assistant dean.

Indiana University

Mr. R. Walden, of Iowa State University, comes to this department as assistant professor. Mr. Harold R. Fraine, for the past three years instructor in accounting at the University of Minnesota, will be assistant professor of business management and accounting.

Assistant Professor Geoffrey Carmichael returns to Indiana after a year's leave of absence which he spent as sales analyst for the state of Indiana with the Ford Motor Company. Professors Mikesell and Pressler are engaged in accounting work for hospitals this summer.

A new edition of Prickett and Mikesell's "Principles of Accounting" has appeared this summer. The book has been considerably extended and new practice materials added.

Iowa State University

R. E. Walden, instructor in accounting, is leaving to become assistant professor of accounting at Indiana.

Associate Professor Harry H. Wade returns to the staff after a year on the New York staff of Price, Waterhouse and Company.

University of Michigan

Professor Paton has been granted an extension of his leave of absence for another year, to teach at the University of California at Berkeley. Professor George R. Husband of Wayne University will teach Mr. Paton's courses during 1937–38. Professor George L. Hull is returning to Ohio Wesleyan University after teaching Mr. Paton's courses for the past year.

Everette Hong of the University of Southern California has been appointed teaching fellow in accounting for next year.

Professor F. E. Ross has resigned his position and has entered the Detroit office of Ernst and Ernst. Professor Briggs has taken over Mr. Ross' courses in public accounting. Mr. Briggs has been elected a director of the Michigan Society of Certified Public Accountants. Professor Taggart has been appointed assistant director of the bureau of business research.

University of Minnesota

Harold R. Fraine, instructor in accounting for the past three years and for several years investment statistician for the First Bank Corporation, is going to the University of Indiana as assistant professor of business management and accounting.

Judson Burnett, assistant professor of economics at Northern Montana College, Havre, will return to this department as instructor in accounting for the coming year to finish his work for the doctorate.

University of Montana

The following men are leaving the department: Dr. Harry Jordan, Dr. Matheus Kast, Professor H. K. Snell.

Mr. Yvill of Dartmouth comes to the department as instructor in business.

University of Missouri

Dr. Samuel Wennberg of Northwestern University has been appointed assistant professor of marketing. He is a graduate of the University of Oslo and has a Ph.D. from Northwestern, and has done extensive research in price and supply forecasting and in the field of consumer economics.

Mr. John E. Dykstra, instructor in the University of Kansas, has been appointed assistant professor of business administration. Mr. Dykstra possesses a Doctor of Commercial Science from Harvard University and will have charge of work in the field of business and industrial management.

University of Pennsylvania

George J. Nowak, who was a teaching assistant last year while completing his work for the master's degree, has accepted a position with the junior college at New Haven, Conn.

Adolph Matz, instructor in accounting, received his Ph.D. at Pennsylvania this spring.

Charles H. Schmidt of Santa Fe, New Mexico, has been appointed instructor in accounting for next year.

University of South Dakota

Professor C. Whitlow is back after a year's leave studying tax delinquencies in South Dakota.

A new course in secretarial accounting is to be offered by Professor Clive Dunham.

Stanford University

Barrett F. Mc Fadon, instructor in accounting at Wayne University the past year and formerly with the comptroller's staff of Wilson and Co., has been appointed lecturer in accounting.

Dean J. Hugh Jackson has been elected first vice-president of the National Association of Cost Accountants. Dean Jackson recently addressed the seventh annual conference of the Harvard University School of Business Alumni Association on the subject of "Self-Regulation of Business vs. Government Control." He has been serving as comptroller of the University since March.

University of Texas

Fladger F. Tannery, instructor in business, has been granted leave of absence for the year to serve as assistant state auditor of Texas.

Professor Monroe S. Carroll, director of business at Baylor University, gave an accounting course this summer at the University of Texas.

Wayne University

Professor George R. Husband has been granted leave of absence for the year 1937–38 to teach at the University of Michigan.

Mr. Barrett F. Mc Fadon, instructor in accounting, has resigned to accept a position as lecturer in accounting at Stanford University.

Mr. Rufus Nixon, formerly with Edward Gore and Co., Chicago, has been added to the accounting staff.